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THE TAXATION OF PRIVATE PENSIONS

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PREFACE

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CHAPTER 1

INTRODUCTION

Private pensions are much the most significant financial asset held by the personal sector. Their importance has grown steadily, and seems likely to continue to do so.

The taxation of private pensions differs from that of virtually all other major assets. In this report we seek to understand why this should be so, how much this treatment might be costing the exchequer and how, if at all, it should be reformed.

In the following chapter we examine the principles behind the taxation of private pensions. We then look at how the taxation of private pensions across the world relates to these principles. Next, possible objectives for the taxation of pensions are discussed, and then particular attention is paid to the possibility of raising extra revenue by changing the tax system. We then describe the UK system in some detail within the framework of the principles and objectives set out beforehand.

In Chapter 7, issues surrounding the measurement of tax expenditures and the tax costs of pension schemes are discussed. In Chapters 8 and 9, these costs are measured, first using a hypothetical model and then by building a full model from actual data. This model is used to cost various possible reforms. Chapter 10 concludes.

CHAPTER 2

TAXING THE PROVISION OF PRIVATE PENSIONS — PRINCIPLES

Three main transactions constitute most private pension schemes and it is these transactions which are the possible occasions for taxation:

- contributions into the scheme, from employer or employee;
- income derived from the investment of contributions;
- payment of retirement benefits from the accumulated fund.

As we discuss in the following chapter, there are examples in various countries of regimes which tax pensions at almost every conceivable combination of these points. However, certain possible combinations are more common than others, and certain combinations characterise alternative ideals for the tax system.

Table 2.1 illustrates four possible tax regimes. We assume for these examples that there is a single income tax rate of 25 per cent, that the rate of return which can be earned on investment is 10 per cent and that we are considering a single contribution derived from earned income of 100, five years before retirement.

TABLE 2.1

Alternative Tax Regimes

	Type of regime			
	A	B	C	D
Earn	100	100	100	100
Tax	—	25	25	—
Fund	100	75	75	100
Net income from 10% gross over five years	61.05	45.79	32.67	43.56
Fund at retirement	161.05	120.79	107.67	143.56
Tax on benefit withdrawal	40.26	—	—	35.89
Benefit withdrawn	120.79	120.79	107.67	107.67

**A. Tax-Free Contributions, Tax-Free Fund Income, Taxed Benefits
(E, E, T)**

This regime allows deductibility of pension contributions from taxable income, allowing the whole of the 100 of earnings into the pension fund. No tax is charged on the investment income of the fund, but tax is charged in full on withdrawal. This type of tax treatment confers a post-tax rate of return on saving equal to the pre-tax rate of return. Faced with this regime, an individual earning 100 can either choose to spend now, paying 25 of tax and consuming goods worth 75, or save now and consume goods worth 120.79 in five years. 120.79 is simply $75 \times (1.1)^5$. It is easy to think of this regime as being a way of deferring pay until retirement, and simultaneously deferring the payment of tax on the pay until retirement.

**B. Taxed Contributions, Tax-Free Fund Income, Tax-Free Benefits
(T, E, E)**

This regime does not allow deductibility of contributions, thus reducing the initial size of the fund from 100 to 75. As for regime A, investment income is free of tax. Withdrawal of retirement benefits attracts no tax. As for regime A, this type of tax treatment preserves the equality of pre- and post-tax rates of return. In the case of regime B, it is easy to see the non-taxation of investment income which ensures this.

**C. Taxed Contributions, Taxed Fund Income, Tax-Free Benefits
(T, T, E)**

This regime is basically that applied to interest-bearing short-term saving in most countries. There is no tax deductibility of contributions, investment income is taxed in full, and there is no tax on withdrawal of benefits, since there is no untaxed investment income. Unlike regimes A and B, this tax treatment brings the post-tax rate of return below the pre-tax rate of return. Here, the post-tax rate of return is 7.5 per cent ($107.67 = 75 \times (1.075)^5$).

**D. Tax-Free Contributions, Taxed Fund Income, Taxed Benefits
(E, T, T)**

This regime produces the same outcome as C, and therefore the same

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post-tax rate of return. Taxation of benefits and exemption of contributions is substituted for taxation of contributions and exemption of benefits.

Other combinations of taxing and relieving at each of the three points are possible, and indeed exist.

If taxing pensions were as simple as implied by the above examples, much of the complexity both of legislation and of the pensions industry itself would be unnecessary. We discuss in Chapter 5 some of the problems associated with attempting to increase revenue in this area which are related to the complexity of pension regimes in practice. We have, for example, assumed that contributions can be identified. Non-contributory employer-funded schemes make this identification quite difficult; indeed employers' contributions may be difficult to identify in many schemes. We have assumed that funds exist, while there are many examples of unfunded schemes and in some countries of effectively Pay-As-You-Go schemes. We have also ignored the problems of identifying investment income, in particular where the income is in the form of unrealised capital gains, and of allocating investment income to individuals in a fund held on behalf of individuals with varying marginal tax rates.

Finally, and perhaps most importantly, we have ignored inflation. For regimes A and B, which do not tax investment income, inflation causes no problem; for regimes C and D, where investment income is taxed, difficulties arise. If investment income is taxed ignoring inflation, the post-tax real return will fall still further below the pre-tax real return. Imagine that in our earlier examples 7.5 percentage points of the 10 per cent interest rate simply reflect inflation. To maintain the real value of savings, a 7.5 per cent post-tax rate of return is required. The post-tax rate of return of regimes C and D was precisely 7.5 per cent, so if they ignore inflation, they would in this case remove the whole of the real return. If the balance between inflation and real returns were to shift further towards inflation, regimes C and D would confer a negative post-tax rate of return. Regimes A and B retain their characteristic of equal pre- and post-tax real rates of return whatever the mix of inflation and real return in the nominal return. In the case of 7.5 per cent inflation, the real return in regimes A and B is 2.33 per cent per year, equal to the pre-tax real return ($1.10 \div 1.075 = 1.0233$).

Regimes of type A and B correspond to an Expenditure Tax type treatment, while regimes C and D correspond to a Comprehensive

Income Tax type treatment. (On Comprehensive Income Tax see Carter Commission (1966) or US Treasury (1984). On Expenditure Tax see Kaldor (1955), Andrews (1974) or US Treasury (1977). A good survey of the debate is Pechman (1980).)

These brief descriptions of possible tax regimes should provide some bench-marks against which to assess the actual regimes summarised in the next chapter, and a basis for our discussion of the criteria for a 'good' tax system for private pensions.

CHAPTER 3 TAXING PENSIONS WORLDWIDE

The discussion in the previous chapter has outlined a range of possible regimes for taxing private pensions. In this chapter we describe briefly the actual regimes of a number of countries and attempt to relate them to the hypothetical regimes of Chapter 2. For the remainder of the paper, we refer to regime A as EET (exempt, exempt, taxed), regime B as TEE (taxed, exempt, exempt), regime C as TTE (taxed, taxed, exempt) and regime D as ETT (exempt, taxed, taxed).

Table 3.1 forms the starting-point for our discussion, showing, where applicable, what type of regime is in place in a number of European Community countries and certain other OECD countries. What it shows is inevitably a heroic simplification in most cases (hence the large number of question marks) but it gives a quick point of reference on which we will be able to base rather more detailed discussion of some of the systems.

The main divergences of the actual schemes from the simplified characteristics in Table 3.1 relate to maxima on contributions which can be made while enjoying tax deductibility, maxima on benefits allowed and different treatment of lump-sum payments. In countries where investment income is taxed, it tends to be taxed rather more lightly than ordinary earned income, and so characterising the regime as the ETT one described above may exaggerate the degree of taxation. This is certainly the case where Belgium and Denmark are concerned. Where more than one possible method of saving for retirement exists, and where they have different tax provisions, Table 3.1 shows those relating to the most common saving vehicle. It is also important to note in interpreting Table 3.1 that the importance of supplementary pension schemes varies enormously between countries, from, for example, Greece and Italy where they are of minimal importance to France and the Netherlands where they provide a very substantial part of income in old age. Furthermore, the funding arrangements vary enormously, with some being based on book reserve accounting (e.g. Germany), some effectively Pay-As-You-Go (e.g. France) and others entirely pre-funded (e.g. Ireland).

TABLE 3.1

Taxation of Private Pensions in EC Countries and Selected Other Countries

Country	Contributions	Fund income	Benefits	Regime
<i>EC countries</i>				
Belgium	Deduct?	Taxed	Taxed	ETT?
Denmark	Deduct	Taxed on real returns	Taxed	ETT?
France	Deduct	n.a.	Taxed	EET?
Germany	Employer deduct Employee taxed	Exempt	Taxed	EET?
Greece	Deduct	Exempt	Taxed	EET?
Ireland	Deduct	Exempt	Taxed	EET
Italy	Deduct?	Exempt	Taxed	EET?
Luxemburg	Employer deduct? Employee taxed	Exempt	Taxed	EET?
Netherlands	Deduct	Exempt	Taxed	EET
Portugal	Employer deduct Employee limited deductibility	Exempt	Taxed	EET?
Spain	Deduct?	Exempt	Taxed	EET?
UK	Deduct	Exempt	Taxed	EET
<i>Non-EC countries</i>				
Australia	Employer deduct Employee partially deduct	Tax at 15%	Partially taxed	?
Canada	Deduct	Exempt	Taxed	EET
Japan	Employer deduct Employee rare	Low tax rate	Taxed	?
New Zealand	Taxable	Taxable	Exempt	TTE
Sweden	Deduct	Taxable at 10 or 15%	Taxed	ETT?
US	Employer deduct Employee taxable	Exempt	Taxed	EET?

Many countries treat lump-sum payments out of pension funds more generously for tax purposes than they do regular payments: Australia, Ireland, Japan and the UK fall into this category. Some other countries such as Canada and France take quite the opposite route, disallowing lump-sum payments out of tax-privileged pension regimes,

while the remainder subject lump sums to tax in broadly the same way as regular payments. It is clear from Table 3.1 that the bulk of countries still operate systems most like the EET regime referred to above, which itself corresponds quite closely to the Expenditure Tax and can also be thought of as a system of deferred pay. These apparently quite generous schemes have typically operated over quite lengthy periods. Where they do not currently operate like this, they have frequently done so in the past.

We now go on to look at some individual countries in varying degrees of detail.

Australia

Recent reforms have been away from an EET type system towards one closer to the TTE regime. The changes, however, have resulted in laws too complex to be encapsulated by one of our simplistic descriptions. Employer contributions continue to be deductible but a 15 per cent tax on these contributions is paid by the fund. Employee contributions are partially deductible up to certain limits contingent on employer support being below a given level, and all concessions are phased out beyond roughly average earnings. This mechanism discourages employers from increasing their contributions beyond the level at which employees lose their rights to deductibility and creates a number of other distortions. Investment income of the fund is taxed at 15 per cent, as are capital gains, but capital gains are taxed after adjustment for inflation, thus making capital gains far more attractive than income from the point of view of the funds. Lump-sum benefits are taxed at 15 per cent beyond a threshold, and pension benefits taxed at the individual's marginal rate less 15 percentage points.

Belgium

Supplementary schemes are reasonably common for salaried employees though rarer for hourly paid workers. They are usually set up at the initiative of the employer though some industry-wide schemes based on collective agreements do exist. Funding is by group insurance contracts or self-administered funds; book reserves and Pay-As-You-Go plans were outlawed in 1985 as a result of concern at lack of employee protection in the event of bankruptcy.

The tax treatment of supplementary schemes varies according to

whether they are funded through group insurance contracts or through funds. Contributions to funds are tax-exempt up to a limit, while premiums paid to group insurance contracts are subject to a special 4.4 per cent tax. Fund contributions and insurance premiums paid by employers are also subject to a special social insurance levy of 3.5 per cent.

The provisions for taxing fund income are complex. Essentially in funds there is a tax on all returns to liquid assets at a rate of 10 per cent on interest income and 20 or 25 per cent on dividends and income from property, as applies to investments by other individuals and organisations. Funds are, however, also quite free to invest in forms which do not attract tax. This results in a clear fiscal incentive to invest in lightly taxed assets. Nevertheless significant amounts of tax are raised in this way. The *Générale de Banque* estimates the total effect is of a tax of 0.49 per cent on total reserves. In addition, there is a 0.17 per cent tax on the total fund. By contrast, the returns to group insurance contracts are in general not subject to tax. There is, however, a special tax on returns above the insured minimum needed to cover benefit liabilities. This tax is levied at a rate of 9.25 per cent; only half is deductible against profits taxes.

Retirement benefits are taxed as earned income if paid as pensions, but lump sums are taxed at a reduced rate of 16.5 per cent. Around 80 per cent of payments are in fact made as lump sums. In the case of lump sums paid by a pension fund, this tax is payable on the full lump sum; in the case of sums paid by insurance contracts, only the guaranteed part of the capital (forming about three-quarters of the total) is subject to this tax, the excess having been subject to the special 9.25 per cent tax on accrual.

Even this is only a rough guide to the way pensions are taxed in Belgium. As this and the description of the Danish system below demonstrate, the taxation of fund income is difficult and tends to lead to a great deal of complexity. This is made worse if, as in Belgium, there are two major ways of funding pensions and these are taxed separately and differently.

Denmark

Supplementary schemes cover rather less than half of employees and tend to be defined contribution rather than defined benefit schemes, although the general intention is to supplement state pensions to 60 or

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70 per cent of final salary after a full career. Many plans provide only a lump sum at retirement, though this is becoming rarer following a 1987 reduction in the limit for tax-deductible contributions to lump-sum schemes.

Both employer and employee contributions to the schemes are fully tax-deductible, though for capital schemes only up to a combined limit of Dkr 28,400 per annum. The most interesting feature of the Danish tax system is a special tax on pension assets introduced in 1984. Under this tax, investment income is taxed in so far as it exceeds 3.5 per cent real returns. The tax is payable in respect of investments relating to actuarial reserves accumulated beyond those at the end of 1982. The tax rate was 44 per cent in 1990, falling to 40.5 per cent in 1991. By taxing only real gains, this gets round the problem outlined previously of taxing purely inflationary gains, and the difference in pre- and post-tax rates of return is limited by the rule that only real earnings over 3.5 per cent be taxed; however, the tax rate applied is above that paid on earned income by most Danes.

This tax on real returns was introduced following a period in the 1970s when it was recognised that the existing rate of real interest would result in a much faster rise in pension savings than in real GDP. A situation was foreseen in which future pensions in payment would be higher than income earned in work. Thus the Act of 1984 was introduced imposing a tax on all real gains including interest, realised capital gains and unrealised capital gains resulting both from asset sales and asset revaluation. Yields and capital gains on shares and equities, returns on indexed bonds and returns on real estate acquired before January 1986 were exempted.

The tax is calculated as a percentage of the net return on the assets subject to tax. The percentage which applies varies year by year and is calculated annually.

The tax has been effective in raising revenue, raising an estimated Dkr 16 billion in 1991. When it was first introduced there was considerable debate about whether it would be worthwhile continuing to save through pension funds. But it is unclear what effect there has been on saving.

Pension benefits are taxed as earned income while lump-sum retirement benefits are taxed at a flat rate of 40 per cent.

France

A comprehensive system of compulsory occupational pensions exists in France funded through a Pay-As-You-Go (PAYG) system known as répartition. Tax-exempt contributions to a collective pension plan earn points for the employee. At retirement the points thereby accumulated determine the pension which the worker will receive, benefits are paid out of contemporaneous contributions and hence there is no funding of future liabilities. Both employee and employer contributions are tax-deductible up to certain limits above which employer contributions are treated as salary. Pension benefits are taxed as income after allowances similar to those applied to income. Lump sums are not permitted.

In addition to these compulsory PAYG schemes, supplementary insured pensions are now fairly common for top management and are gradually being extended to the whole cadre category. These may be either defined benefit or defined contribution plans. Funds must be placed with an insurer to obtain tax deductibility. Book reserves are not permitted on a tax-deductible basis. Pension benefits from individual plans are normally partially taxed on a fixed scale, based on the pensioner's age.

Germany

Financing is mostly by the book reserve system; there is no special fund. A company establishing a pension plan and promising benefits sets up a reserve in its books and can claim a tax deduction each year for allocation to that reserve. Since January 1987 it has been compulsory for a book reserve to be set up for any pension promise not funded by direct insurance or a private pension fund.

The system works through prospective pension liabilities being charged each year against the company's profit and loss account and balance sheet. Charges computed in accordance with bases agreed by the tax authorities can be deducted in assessing corporation tax liabilities. Scheme members rank with other creditors in the event of insolvency of the parent company; hence legislation requires that vested benefits and pensions in payment should be insured through membership of the solvency insurance scheme, 'Pensionsicherungsverein'. Premiums for such insurance are in turn tax-deductible. There is no charge to employees until pensions are paid.

Pensions are then taxed as other income, subject to a lower rate of tax on small incomes.

Employee contributions are not really possible in a book reserve type scheme. Employer contributions can be deducted in assessing corporation tax liabilities. Emerging pensions are taxed as normal income except that 40 per cent is tax-free up to a low maximum (currently DM 4,800 per annum).

The taxation of pensions funded through direct insurance is rather different. Both company and employee contributions (which are very rare) are considered taxable income in the hands of the employee. Hence emerging benefits are taxed very leniently if paid as a pension and not at all if paid as a lump sum. So while the main type of supplementary pensions follows the common EET taxation formula, those funded through direct insurance are closer to the TEE framework. Of course, in the simplest case, these have been shown to be identical in effect.

From a UK perspective, there seem to be many disadvantages to a book reserve based system. Clearly such a system requires comprehensive and expensive insurance. This insurance requirement is mainly a reflection of the necessarily undiversified nature of the risk attached to pension entitlements funded through a book reserve system. A book reserve system is plainly unsuitable for small and/or short-lived companies; the archetypal large, long-lived company is becoming less and less representative of employers in the UK. Finally, it is hard to integrate employee contributions into a book reserve type system, and portability of pensions from one employer to another is likely to be complex to arrange.

Ireland

Occupational pensions are quite widespread in Ireland, where employers and employees contribute to funds set up by individual employers. These contributions are fully tax-deductible, up to a maximum of 15 per cent of annual salary. Fund income is exempt from tax and pensions in payment are taxed as ordinary income. The only exception is that up to 1.5 times final salary is allowed as a tax-free lump sum on retirement. To receive this favourable treatment the pension must be accumulated at the rate of one-sixtieth of final salary for each year of service up to a maximum of two-thirds of final salary. Otherwise the system is the straightforward EET regime.

Italy

As a result of a generous state system, the scope for supplementary pension schemes in Italy is extremely limited, and they are correspondingly rare. Where they do exist, employer contributions are tax-deductible if certain conditions are met; in particular, there must be a collective agreement and it must be run by a clearly defined separate legal entity. Benefits in payment are subject to income tax though lump-sum payments are treated more leniently.

Luxemburg

Company pension programmes tend to apply mainly to senior management and in multinational corporations. Financing is similar to Germany with the book reserve method being commonest, and tax-deductible. Again as in Germany, employer contributions to pre-funded schemes are considered taxable income in the hands of the employee. Benefits from tax-free contributions are taxable while lump sums accumulated through taxed contributions are tax-free.

Netherlands

Occupational pension schemes play an important part in providing retirement income. Both employees and employers tend to contribute to a separate fund, and both sorts of contribution are fully tax-deductible. Pensions in payment are taxed in full. At present, no tax is levied on fund income or assets. Draft legislation, however, has been prepared by the Ministry of Finance to introduce a tax on pension fund surpluses.

Originally it was proposed to bring the pension funds within the scope of the corporate income tax. Because of the special nature of the funds, however, in particular the fact that they are *not profit-making entities*, corporate tax exemption will be maintained and the proposal is to impose a separate levy. The original thinking behind this proposal was a desire to balance pension fund incomes and obligations. Recent surpluses had resulted in funding without corresponding obligations. Thus the intention behind the Bill was to reimpose the intended balance through the introduction of a levy on *durable* surpluses. Funds without surpluses would be unaffected; those with surpluses would have the chance of eliminating them by improving pensions in payment or

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reducing contributions.

The intention is that if after five years a surplus still exists and contributions are non-zero, a tax will be levied at a rate of 40 per cent on whichever surplus was lowest at the start of each of the six preceding years.

This tax seems designed more to encourage pension funds to distribute their surpluses than to raise significant amounts of money. If enacted it is likely to prove administratively complex. Determining what part of a fund's assets are surplus relative to its obligations is either very difficult or arbitrary. Given a wide spectrum of opposition to the measures, it is by no means certain that they will in fact come to fruition.

New Zealand

Here bold steps have recently been taken making all contributions taxable, taxing all fund income (with no allowance for inflation) and then leaving all pensions untaxed; i.e. moving from an Expenditure Tax EET regime to an Income Tax TTE system. Thus pension saving has been put on the same basis as saving in an ordinary interest-bearing account. These changes were made as part of a major restructuring of the tax system involving substantial reductions in marginal income tax rates both for individuals and for companies.

Scheme members' contributions ceased to be deductible from December 1987 whilst company contributions became subject to a 24 per cent fringe benefit tax. From April 1989 this was replaced by a 33 per cent final withholding tax so that for every dollar contributed by a company, 33 cents are paid in tax and only 67 cents go into the fund. Since April 1990 the investment income of pension schemes has also been taxed at 33 per cent.

These changes have had a substantial impact on savings behaviour with, as one might expect, a reduction in the importance of occupational pensions as a means of saving. Many smaller employers have wound up their schemes entirely, whilst most larger employers have maintained their schemes but reduced promised benefits to compensate for the considerable increase in cost.

Spain

There have been recent changes in the laws regarding the tax treatment of complementary pension schemes, which are run by many large

employers. The 1987 law allowed for tax deductibility of contributions to recognised funds which must satisfy some fairly stringent minimum criteria including immediate vesting, full external funding, non-discriminatory coverage of all employees and a high degree of workers' participation. For the large number of schemes which still do not comply with the 1987 law, employer contributions are added to the taxable income of employees. PAYG and book reserve schemes do not comply with the conditions required for recognition by the 1987 law. Benefits on retirement are taxed as earned income.

Recent reform in Spain, then, has been towards the common EET type of treatment, but despite the tax efficiency of companies achieving recognition for their pension schemes, many still maintain schemes in which contributions are taxable as income of the employee. It seems likely, however, that this will change with time.

Sweden

Until 1991, pensions in Sweden were taxed under something very close to the EET type regime. Under tax reforms introduced in that year which touched many parts of the tax system, not just pensions, the burden was redistributed without the total changing.

Under the new system, contributions to pensions remain tax-exempt but fund income is now taxed. The tax is levied at just 10 or 15 per cent as against a general income tax rate of 30 per cent. Benefits continue to be taxed as ordinary income.

United Kingdom

The taxation provisions for occupational pensions in the UK are close to the EET type form. Defined benefit schemes (and defined contribution schemes) can achieve the status of an exempt approved scheme subject to certain restrictions on the levels of benefit allowed. Subject to these conditions, contributions to a fund by both employee and employer are fully deductible from income for tax purposes. Income and capital gains accruing to a fund are entirely free of tax, while pensions in payment are taxable in full, though a lump sum on retirement of up to 1.5 times final salary can be taken free of tax. A price-indexed limit on the maximum level of pensionable earnings was imposed in the 1989 Budget.

Since 1986, defined contribution or money purchase schemes have

been able to 'contract out' of the state scheme, and since then have become increasingly popular. They enjoy tax advantages very similar to those enjoyed by the defined benefit schemes. Money purchase occupational schemes have the same limits on tax relief as the defined benefit schemes, although limits on tax relief for personal pensions are defined by maximum contribution rates which vary with age. The limit on the size of the tax-free lump sum in a personal pension is set at 25 per cent of the value of the accumulated fund.

Debate about the desirability of the tax-favoured status for pensions continues. Taxation of fund incomes has been seen by some as a way of raising money. The Labour Party proposed before the 1992 general election that the tax exemption for contributions should be limited to the basic rate, but this proposal seemed to have been dropped in its final set of tax reform proposals. At present, higher-rate taxpayers effectively receive a tax rebate of 40 per cent on pension contributions, while basic-rate taxpayers, forming the vast bulk of the taxpaying population, receive just a 25 per cent rebate.

United States

Like Britain, the US has a large funded occupational pension sector. The conditions governing 'qualified retirement plans' are defined by the Internal Revenue Code of 1954 and the Employee Retirement Income Security Act of 1974 (ERISA). These are similar to those defining an exempt approved scheme in the UK. There are three important differences. Firstly, employee contributions are not deductible. The normal result is that there are no employee contributions. Secondly, qualified plans may only provide retirement benefits, and all those which they do provide, including lump sums, are taxable in the hands of the pensioner. A rather more favourable treatment of lump sums was phased out in 1974. Finally, ERISA imposes extensive regulatory obligations on pension funds on issues such as solvency, vesting and disclosure, and compliance is a condition of tax approval.

Individual Retirement Accounts, something like personal pensions in the UK, may be purchased by individuals and limited contributions to these attract similar tax privileges.

The basic structure of taxation in European Community and other OECD countries tends to be very similar. The EET, Expenditure Tax

type treatment is easily the most common form. Institutional arrangements, however, differ significantly. In some countries the type of tax treatment depends heavily on the form of funding used, as in Germany where book reserve funding attracts tax relief on the way in, funding through group insurance attracts some relief on the way out. In Spain the conditions attached to the receipt of tax advantages are considered so stringent by some organisations that many pension funds do not receive them. Nevertheless the only countries which unambiguously differ from the EET system are New Zealand, Sweden, Australia, Belgium and Denmark. Even in the latter four countries the taxation arrangements are in fact considerably more lenient than their characterisation as ETT type systems would suggest.

That said, proposals to change taxation provisions exist, particularly in the Netherlands where there are strong moves towards taxing fund surpluses. Worldwide there have been extensive changes to taxation provisions in such places as Australia (see Knox (1990b)), New Zealand and Sweden away from existing EET type structures, and the debate is alive in the US about whether its EET type structure should be maintained (see, for example, Munnell (1992)). So the question remains as to whether the present system in most countries, including the UK, should be maintained or whether a move towards a treatment more like a Comprehensive Income Tax should be considered. The choice clearly depends on the principles set out previously but also on the objectives for the taxation of private pensions and the feasibility of achieving them. We look at these issues in the next chapter.

CHAPTER 4

OBJECTIVES FOR THE TAXATION OF PENSIONS

Two main considerations seem to lie behind attempts to review the tax treatment of savings in general and private pensions in particular. One is the concern for fiscal neutrality — the desire to achieve a tax structure which as far as possible avoids discrimination between different kinds of activity and which leaves choices unaffected by tax considerations. The second is a desire to raise revenue by eliminating subsidies to particular activities which take the form of favourable tax treatment rather than explicit items of public expenditure.

There is no feasible tax regime which both raises revenue and is fiscally neutral in all aspects. Taxes inevitably distort economic behaviour, so that the best we can do is to remove unnecessary deviations from neutrality and choose those which are least damaging in their overall economic effect. Two kinds of incentive are particularly important in considering the tax treatment of pension funds. One is the incentive to save, rather than to consume. The second is the choice of the form in which to save. We consider each kind of incentive in turn. There are two ways of interpreting fiscal neutrality in relation to the decision to save. We might seek to be neutral between consumption and savings, or we might seek to be neutral between present and future consumption. Neutrality between consumption and savings is achieved by a Comprehensive Income Tax on real income of all types. Whatever the source of revenue, whether it be from work or from savings, and whether it is consumed or saved, it is taxed in the same way and at the same rate. This approach appears to be gathering support, as evidenced by the reforms in Australia and New Zealand and by debates throughout the world. However, it is worth noting that there are peculiarities associated with this approach. With a Comprehensive Income Tax (TTE in our earlier discussion), savings are treated as if they are simply another commodity, akin to consumption. But people do not, in the main, save for saving's own sake; savings are not a commodity in themselves, but a means to future consumption. In relation to retirement savings, this perspective is particularly obviously the appropriate one. The relevant concept of neutrality is not between consumption and savings but between consumption now and consumption in the future.

It is this neutrality in the impact of the tax system on the decision between current and future consumption which is achieved by tax systems of the EET type most common internationally. Such systems offer the alternatives of paying now, or of deferring tax by means of contributions to private pension schemes and paying tax when the benefits are derived. Thus both present and future consumption are taxed on the same basis. And as noted in Chapter 2, the EET regime maintains equality of pre- and post-tax returns, another reflection of the lack of distortion imposed on the decision as to whether to consume now or in the future.

The Comprehensive Income Tax or TTE approach, by contrast, distorts choice away from future consumption by reducing the amount of future consumption which can be achieved by sacrificing current consumption below the level which would exist in a no-tax world, and in an inflationary world with nominal investment income taxed, could actually impose a penalty on deferred consumption. Thus if fiscal neutrality between current and future consumption is desired, the appropriate tax system is an Expenditure Tax type system.

The second concept of fiscal neutrality which is of interest to us concerns the way in which different kinds of savings are taxed. Here, neutrality demands that all forms of saving are taxed in the same way. If not, more generously treated forms of saving will tend to attract greater flows of saving, regardless of their underlying economic efficiency. In general, different forms of saving are taxed very differently.

Although it is hard to make generalisations in this area, two forms of saving stand out as being conceded relatively favourable tax treatment in many countries, being owner-occupied housing and private pensions. Governments in the 1980s made many statements to the effect that fiscal neutrality between forms of saving was an important goal, but few made much progress towards it. There were two main reasons. Firstly, although most statements were in favour of a Comprehensive Income Tax type treatment, nowhere was any serious attempt made to adjust investment income as well as capital gains for inflation. Secondly, very few governments had the courage to remove the 'privileges' associated with owner-occupied housing or private pension schemes.

Part of the reason for lack of action in this second field was the widespread belief that there are strong arguments for providing special incentives for private pension provision. It is to a discussion of these which we now turn.

Arguments for Tax Incentives

Once more, two types of argument are often advanced to defend the special tax advantages of private pensions; the first type argues that pension saving is more important than other saving, the second that saving in general should benefit from tax incentives.

Households save for a variety of reasons. They save in order to redistribute income over their lifetime to use it when they are old, or sick or unemployed, or when young children reduce the family's income and increase its outgoings. They save in order to accumulate assets from which they may derive benefits (housing services from owner-occupied housing) or which they might use to establish or develop a business. They may also save in order to leave money to their children.

It is not immediately easy to see why retirement savings should be singled out in this list. They are all worthy motives, which is no doubt why, at one time or another, in one place or another, all have been singled out for fiscal privilege, although frequently in an uncoordinated manner. Several possible arguments exist.

Firstly, individuals may fail to perceive accurately their likely needs in old age, and this failure of perception or information is more serious here than in other areas. It would be plausible to argue that this could be so simply because at the beginning of the period when saving for retirement might make sense, old age can seem very distant. This is a basically paternalistic argument which asserts that governments know better than their people what is good for them, and should distort choices using the tax system in an attempt to correct the deficiencies of individual preferences.

A second argument for singling out retirement savings is that they can be particularly significant in reducing other forms of state expenditure. If individuals fail to save for their old age, the state will have to provide incomes for them during that period. Certainly in most countries at least a part of the social security system which supports the elderly pays benefits which are related to income. If governments can encourage more people to save for their retirement, and also those who already are saving to save more, expenditure on means-tested benefits to the retired would fall. The importance of this argument will obviously vary from country to country.

A third argument might be that private pension schemes are superior to other financial intermediaries. This could relate either to their

investment performance or to the broader social and economic implications of their investment policies. Although this is a possible argument, it is not one which has been much put forward, and it is difficult to give it much weight, not least because in many instances private pension funds are organised by financial intermediaries engaged in a wide range of business other than the provision of pensions.

Finally, it is worth pointing out that unless there are some special advantages associated with saving money in a form which means that the money cannot be retrieved until retirement, that money may instead be saved in a form which allows more flexible access. In other words, money currently locked away until retirement might be put in, for example, a building society from which it could be withdrawn early. The saver may find this additional flexibility preferable in the short run, but the longer-term consequences for income in retirement may be quite substantial.

There is no suggestion that private pensions are anything other than a desirable thing, and there are some arguments for particularly favourable tax treatment for them. The strength of these arguments depends on the extent to which pension saving would fall in the absence of any special privilege. The recent experience of New Zealand suggests that such falls could be significant. If this is the case, the important issue for policy-makers is the determination of the most appropriate form in which to provide some incentive to pension saving. We return to these questions later.

The remaining argument for tax incentives for pensions relates to the overall level of saving. In many countries there is concern that savings rates are too low. The US, the UK and Australia would be obvious examples, while in countries like Japan and Germany such a problem seems not to exist. One of the longest-running debates in applied economics has been the extent to which new tax incentives for saving in a particular form will increase the overall level of saving. It is clear from the experience of Registered Retirement Savings Plans in Canada, Individual Retirement Accounts in the US and personal pensions in the UK for example (see for example Carroll and Summers (1987) and Venti and Wise (1986)), and the popularity of private pension saving in general, that new or existing generous tax regimes for certain types of saving can be enormously 'successful', if we measure success only in terms of amounts of money flowing into the favoured regime.

Such a measure of success is of little interest. Of course, tax incentives

for saving in a certain form will attract funds. We need to know what impact this has on funds held in, and flowing into, other forms of saving, and the impact of the new scheme on government tax revenue, since if we are concerned about any measure of saving it is national saving, which includes public sector saving, not simply personal sector saving.

It would be quite possible for a new savings incentive to appear to be successful, while in fact reducing personal sector saving, reducing public sector saving and thus reducing national saving (see Munnell (1982, Ch. 4) for a discussion). If we started from a world in which individuals had a relatively fixed demand for an income level in retirement, but in which savings were harshly treated by the tax system, the introduction of tax incentives would allow a reduction in current savings without any reduction in the level of retirement income, thus reducing the level of personal sector saving. At the same time, since the tax incentive would reduce tax revenue, public sector saving would fall.

There has been a great deal of empirical work using microeconomic data to attempt to provide conclusive evidence on the likely effect of tax incentives. This is an extremely difficult area, since the data requirements are very severe: complete answers would require detailed information on all assets, incomes, preferences and expectations for a large sample of individuals over a long period. To the extent that there is a consensus, it is that tax incentives can increase personal saving, and that after taking account of the reduction in tax revenue, there may be a small increase in national saving (see Bovenberg (1989), Feenberg and Skinner (1989), Munnell (1986) and Venti and Wise (1987) for some representative views). Some of the most recent work (see Gravelle (1991)) casts doubt on the suggestions of even a small increase in national saving. These results are still debated, and would tend to vary enormously from country to country as a function of the nature of the tax system and the determinants of saving. Certainly differences in tax systems can go only a little way towards explaining cross-country variation in saving.

CHAPTER 5

INCREASED REVENUE FROM PENSIONS?

As tax reform gathered momentum in the second half of the 1980s, a common theme of 'broadening the base and lowering the rate' could be discerned in much of the debate about what to do and in much of the description of what was done, although perhaps not so clearly in what was done. This objective seemed to imply changes to the taxation of pensions with a view to raising more revenue, which could be used to cut tax rates. As we have already noted, some countries have already moved in this direction, and many others seem to be considering the option.

Starting from a tax treatment of the EET type such as that in the UK, there are three areas in which changes could be made in an attempt to raise more revenue: the taxation of contributions, the taxation of pension funds themselves and the taxation of benefits paid out. We examine each in turn.

The Taxation of Contributions

One seemingly obvious way of raising revenue from taxing pensions is to give no relief, or only limited relief, to employees for contributions to pension schemes. Such relief could be abolished where it exists, or restricted to a low rate of tax, or subjected to a maximum. Yet it would be pointless to make such a change without simultaneously reviewing the tax treatment of employer contributions. Indeed, it seems inevitable that all forms of contributions to pension funds be given identical tax treatment. If not, employees, employers and pension funds will so arrange their affairs as to make all contributions in the most tax-efficient manner. The losers from such a position are the ill-advised or those unable to take advantage of the most lightly taxed route. As we noted earlier, the general non-exemption of employee contributions in the US means that very few employee contributions are made, not that large amounts of tax are raised.

If employee contributions are to be subject to tax, it seems that employer contributions must also be. There are few practical problems in subjecting employee contributions to tax; tax due would simply be calculated on income inclusive of contributions rather than exclusive

of them. Difficulties do arise in the case of employer contributions, however. In principle, contributions made by employers on behalf of their employees would be treated as a benefit to the employee, and taxed as income of the employee. This causes no problem where employer contributions are clearly defined and linked to particular individuals, but difficulties arise in the much more common procedure where an employer makes general contributions to a fund related to aggregate payroll. Here the task of allocating employer contributions to employees is challenging. One possibility is simply to require employers to attribute general contributions to individual employees. The implementation of this would be made less difficult than otherwise by the provisions of the Income and Corporation Taxes Act of 1988 which lay down a basis for attributing contributions by employers to individual employees for the purpose of assessing the tax liability of those employees.

An alternative would be to levy tax on employees who are members of defined benefit schemes on the value of their pension rights, rather than on contributions. Contributions to defined benefit schemes would remain tax-deductible, but the benefit in kind in the form of increased pension rights would be taxable. This route requires an answer to the question of what the value of the rights is; valuing such rights may be at least as difficult as allocating general contributions. Valuation is especially hard where the final pension is a function of years of employment and final salary. It is also worth noting that *rights* within pension schemes are frequently defined quite narrowly, with pensions paid frequently far exceeding rights. If tax authorities imposed a tax on the annual increase in the value of an individual's pension rights, it is easy to imagine that such rights would very soon be all but replaced by discretionary payments. The alternative of trying to tax as income the expected value of discretionary payments many years in the future is not a task which would appeal to many revenue authorities.

The problems outlined above are not insuperable; the difficulties of taxing general unallocated contributions, for example, can be dealt with, as in New Zealand, by imposing a flat-rate tax. This solution is reasonably fair if most taxpayers face the same marginal income tax rate, and somewhat inequitable in countries with multiple-rate income taxes. And although calculating the value of accrued pension rights is hard, we must remember that such calculations are already made, for example, to determine transfer values. If a country is determined to tax pension contributions, it can certainly be done.

If there is no tax relief for pension contributions, then it is inappropriate to tax the whole of any pensions in payment as income, since part would already have been taxed. The easiest solution to this, adopted by New Zealand, is to tax the income of pension funds as well, making any further taxation of pensions in payment unnecessary. But if the income of funds is not to be taxed, full exemption from tax of pensions in payment produces a TEE regime, equivalent in impact to the EET regime, although with the timing of tax payments advanced. If the aim is to move to a system which raises more revenue, without taxing contributions twice, rules to distinguish between the underlying contributions and the return on them would be needed, so that only the previously untaxed elements would be taxed. These rules would probably be quite complex, and inevitably cause some distortions. The Australian system, which imposes partial tax on contributions, fund income and benefits, illustrates some of the problems.

In fact, a movement to a straightforward TEE regime would raise some money because individuals tend to be richer when contributing and poorer when receiving and, hence, not all benefits would be subject to tax. This is discussed further in Chapter 9. A TEE regime would also imply a difference in the timing of tax payments. Instead of the government effectively postponing its tax revenues until the retirement of the contributors, it would receive the revenue immediately. This might appear attractive but suffers from two drawbacks relative to the current system. Firstly, under the current system individuals are at least certain of receiving their tax relief; there may be some uncertainty associated with deferring that relief until retirement, an uncertainty dependent upon trust in the goodwill of future governments over an extended period of time. Secondly, the current system has the advantage for the government that tax revenues are deferred until the time at which they are most likely to be needed, i.e. when more people are retired. Given expected demographic change, it may make sense for the government to defer its revenues to the time when the number of pensioners threatens to be a major burden on the national budget.

The Taxation of Fund Income

Taxing fund income is an alternative (or additional) route to raising revenue from pension schemes. There is no obvious lack of logic in a system which taxes both contributions and fund income, as is done in New Zealand, although pensions in payment should then be relieved

Taxation of private pensions

of tax. If not, pension funds would suffer a substantial fiscal disadvantage relative to other means of saving, and could be expected to decline rapidly in popularity and importance.

If the problems with taxing contributions outlined above are thought to rule out such a regime, the alternative of taxing fund income while leaving contributions untaxed and benefits taxed is also open. This is the type of system which operates in Japan, although with a low rate of tax on fund income. There is an apparent element of double taxation in a procedure which taxes the income of funds as it is received and again when it is paid out. But it is the same element of double taxation which is intrinsic to the taxation of income in general where both the capital and the returns on capital are taxed. If pension fund contributions are free of tax while other forms of saving are taxed when savings are made, then pension funds are effectively 'geared' by the rate at which tax relief is given as contributions are made. The effect of a full tax charge is then to 'gear down' as pension payments are made. The state under such a regime is effectively a shareholder in the private pension scheme.

If there is to be a tax on fund income, a decision as to the rate at which it is to be charged is needed. The most obvious candidate is the marginal tax rate of the majority of members of the scheme, provided that this majority is a large one. If there is a wide divergence of tax rates amongst scheme members, then any single tax rate will inevitably be unfair, but the problems of attempting to allocate fund income to specific individuals and then tax it at their marginal tax rate seem likely to be too great to consider such a route seriously.

Perhaps the greatest problem in this area is designing a system that deals properly with inflation, since a system that taxes full nominal income will be very vulnerable to inflation. In New Zealand and Australia, no adjustment is made to fund income to account for inflation, producing a position where at high inflation rates the post-tax rate of return can become negative. This clearly makes little sense, but the difficulties of adjusting income for inflation would be very great. The area which is most frequently chosen for the attempt to adjust for inflation is capital gains; many countries now have capital gains taxes which adjust for inflation.

The combination of taxing full nominal fund income and taxing real capital gains in the fund, as in Australia, provides a strong bias to the fund in favour of assets producing capital gain rather than regular income, and this bias is a function of the rate of inflation, being stronger

the higher the rate of inflation becomes. This sort of distortion will tend to affect the portfolio behaviour of funds, and is clearly undesirable.

One more detailed change that has on occasion been suggested is a limitation on capital gains tax relief to investments which have been held for a specified period. The idea behind such a suggestion is presumably to limit stock market volatility and discourage short-termism. But such a change would distort the workings of the capital market by locking investors into investments which failed to perform as expected, and would thus seem undesirable on market efficiency grounds. There is no a priori merit in holding assets for long rather than short periods; interference in the portfolio allocation decisions of pension funds seems a good example of what governments should not do, whether using tax incentives or otherwise, without very clear reasons. It is hard to imagine a set of reasons for tax incentives for long holding periods that would stand up to rigorous analysis.

One further problem in this area relates to the way in which a tax on fund incomes could be introduced if it did not already exist. One possible transition mechanism would be to close all existing schemes to new contributions, and allow these schemes to continue to accumulate tax-free income and pay out taxable pensions. New contributions would go into new funds with taxable incomes. Such a transition would be challenging for pension funds, actuaries and tax authorities, but ought to be possible. An alternative route would simply be to subject fund income to a relatively low rate of tax to begin with, reflecting the large share in the fund of 'old' contributions, perhaps increasing the rate steadily over time.

The Taxation of Pension Benefits

As already noted, the main form of taxation levied on the activities of private pensions in many countries, including the UK, is of benefits in payment. While it is true that if contributions and/or fund income are taxed it is not necessarily appropriate that all benefits be taxed, where relief exists for contributions there is a strong case for taxing benefits.

The most significant area for debate over the taxation of benefits is the appropriate treatment of lump-sum payments. In many countries (Australia, Ireland, Japan and the UK, for example), lump-sum payments are taxed more leniently than pensions. Given our belief that all forms of contribution to private pensions should be taxed in the same way, we might be expected to believe that all forms of withdrawal should

be taxed in the same way.

Two arguments in support of preferential tax treatment for lump sums are frequently advanced. Firstly, such provisions are an accepted part of the regimes where they exist, and therefore should not be changed. It is certainly true that to announce immediate implementation of the full taxation of all lump sums would be unfair, and would incorporate a measure of retrospective taxation to the extent that individuals had entered into pension contracts in the expectation that they would be able to withdraw a tax-free lump sum. For this reason, any imposition of tax on lump sums in the future would probably need to be restricted in some way so as to impose tax only on benefits earned after the change in the rules, or at least to introduce any new tax charge over a fairly lengthy transitional period. This issue of retrospection was discussed at great length in the lead-up to the 1985 Budget, during which time Nigel Lawson, the then Chancellor of the Exchequer, seemed to imply that any taxation of lump-sum benefits in relation to past contributions would be retrospective taxation, and therefore unacceptable.

One possible objection to the taxation even of the future accrual part of a lump sum may be raised in the case where people are expecting to repay a mortgage using the tax-free lump sum from their pension. Those in a situation such as this would presumably have to make additional arrangements where possible, perhaps taking out a partial repayment mortgage. In the long run it may be no bad thing if the two entirely separate transactions — buying a house and providing a pension — were to be disconnected.

The second argument in support of preferential treatment for lump sums relates to personal capital accumulation and general capital formation and suggests that the availability of tax-free lump sums may encourage this. It is certainly the case that private capital accumulation may stimulate enterprise and risk-taking in the economy. But a relief the receipt of which is conditional on reaching retirement age seems somewhat inappropriate if this is the aim. There are arguments for supporting retirement savings, but these do not imply encouraging lump-sum provision; rather the reverse. There may be arguments for encouraging the accumulation of capital sums by individuals, but not especially individuals past retirement age; rather the reverse.

There seem to be no very strong reasons for treating the lump sum more favourably than pension payments for tax purposes at least in the medium term. If lump sums are taxed, the question of whether they

should be taxed in the year of receipt becomes relevant. Once more, the question is unimportant in a single-rate income tax, but significant with a graduated tax system. Under a graduated system, any lump sum might attract a marginal rate of tax well in excess of the recipient's expected average marginal tax rate during retirement. One possibility would be an averaging provision, but it could also be argued that any disincentive to lump sums caused by graduation was appropriate, and should be allowed to stay.

It would be possible to raise more revenue from private pensions than is raised at present. However, serious problems are associated with the taxation of both contributions and fund income: it is not an accident that neither are taxed in most regimes. The one area where increased taxation does seem appropriate is lump-sum provisions, but even here, entrenched expectations may make raising more revenue quickly difficult and mean that any change would increase the complexity of the system.

CHAPTER 6

THE UK TAX SYSTEM

In simple terms we have already described the taxation system as it relates to private pension provision in Britain as being of the EET type. Contributions to schemes, whether by employee or employer, are exempt from tax, there is no tax on fund income and pensions in payment are taxed in full. While in practice the situation is considerably more complex than this, this brief description sums up the tax treatment of private pensions quite well.

In this chapter we first give a brief history of the development of pension taxation in Britain before explaining the current system in more detail. The taxation of the main defined benefit occupational schemes is discussed separately from that of the newer defined contribution Personal Pension Plans. We make some comment on their relationship with the State Earnings-Related Pension Scheme (SERPS) in passing. Finally the taxation of pensions is set within the context of other forms of investment and saving available in Britain.

History

The foundations of pension fund taxation were laid down after the First World War. In this period, interest rates were low and personal tax thresholds high. Only around 2 million employees paid income tax in 1920–21 compared with over 17 million in 1945–46. This is what originally justified the introduction of tax exemption for fund income.

Following legislation enacted in 1921, two alternative tax regimes for pensions existed. One, modelled on the treatment of life insurance policies, involved subjecting employee contributions to tax at half the standard rate whilst exempting employer contributions from tax. Fund income was taxable but benefits could be paid as a tax-free lump sum. This almost ETE regime is rather unusual, not currently being in use in any of the countries examined in Chapter 3.

The other regime was similar to that for friendly societies. All contributions and fund income were free of tax, though most beneficiaries were not taxpayers anyway. Benefits had to be paid in the form of taxable pensions and were subject to a composite rate tax of one-third or one-quarter of the standard rate of income tax.

The advent of high levels of taxation during the Second World War demonstrated the shortcomings of these provisions. With an excess profits levy approaching 100 per cent, companies were able to make payments into funds at almost no cost to themselves. Secondly, the possibility of an unlimited tax-free lump sum in a period of high taxation became particularly attractive. Many well-paid employees had large proportions of their salary paid by their employers into funds from which they could draw a tax-free lump sum on quitting the company.

This latter problem was largely overcome after 1947 when new provisions, in line with the rules of the civil service scheme, placed a limit of a quarter on the proportion of rights in insured funds which could be commuted to a lump sum. It remained clear, however, that a more fundamental rationalisation was required both to limit the increasing use of pension provision as a means of avoiding tax and to introduce consistent treatment between different types of funds.

The Government's response was to set up the Millard Tucker Committee which reported on the issues in 1954. It produced limited proposals to remove some of the major anomalies and promote uniformity of treatment by extending the privileges of each of the two fiscal regimes to the other. Thus the limited tax-free lump sums available under the insured schemes were to be extended to self-administered funds. Equally the full relief on employee contributions and the tax exemption of fund income enjoyed by self-administered schemes were to be extended to insured ones. These latter recommendations were implemented in the 1956 Finance Act but self-administered funds established under the rules of the 1921 Act remained unable to provide lump sums. Similar tax concessions for the self-employed were also introduced, though contributions were limited to 10 per cent of earnings up to a maximum of £750 per annum and no lump-sum commutation was allowed. Take-up of these policies remained low since other benefits were also limited and the policies could not be used as collateral for loans.

The final major piece of legislation was introduced by the 1970 Finance Act. This required conformity not only from new schemes but also from existing ones which were given until 1980 to gain approval. This at last introduced a common tax regime for all superannuation funds. The defined benefit schemes described below work under the structures set out by this legislation.

Defined Benefit Schemes

The 1970 Finance Act defines the conditions under which a pension scheme can be allowed the status of an 'exempt approved scheme' and hence benefit from the tax advantages associated with pensions. (These conditions also apply to employer-run defined contribution schemes.) The Board of the Inland Revenue retains extensive discretionary powers to give approval to the large number of schemes which do not actually satisfy the criteria laid down in the Act. The main restrictions on approval relate to the maximum level of benefits which limit the annual pension to two-thirds of final salary and the tax-free lump sum to 1.5 times annual salary. In general, firms will only allow three-eighths of final salary to be taken as a lump sum for every year of contributions, making 1.5 times final salary only after 40 years. The taking of such a lump sum reduces the allowable pension by an amount dependent on the size of the lump sum taken. A man at 65 will typically see his annual pension reduced by one-ninth of the value of the lump sum, a woman at 60 will typically have her pension reduced by one-eleventh of that amount.

Subject to these conditions, the contributions by both employee and employer to a fund are fully deductible from income for tax purposes. Pension contributions by an employer are not treated as taxable benefits in kind of the employee, and can be set against corporation tax like other labour costs. The income and capital gains of the fund are entirely free of tax, while pensions in payment are taxable in full, though a lump sum on retirement up to 1.5 times final salary is tax-free, as are any similar provisions for payments on death in service.

A further limit on the allowable generosity of private pensions was introduced in the 1989 Budget. It imposed a £60,000 limit on pensionable earnings for new schemes or new entrants to schemes. This was to be indexed by the Retail Price Index and presently stands at £75,000. For details of this change and its possible effects, see Dilnot and Disney (1989). The present effect of a limit set at this level of earnings will clearly be small as only a very small proportion of those approaching retirement earn this much. However, the fact that it is indexed only to prices means that if earnings grow faster than prices, as they generally do, more people will be affected over time. Dilnot and Disney show that with 3 per cent per annum real earnings growth, in 40 years' time this ceiling would stand at just £18,400 in real earnings terms, and over 15 per cent of 50- to 64-year-old occupational scheme

members would be affected.

An important aspect of occupational pensions of this type is their relationship with SERPS. Although not directly relevant to taxation, this relationship is an essential feature of pension provision in Britain. Central to the system is the ability of occupational pension schemes to 'contract out' of SERPS. To contract out, the scheme must provide a 'guaranteed minimum pension' (GMP) based on average indexed earnings during years within the scheme. In practice, occupational pension schemes have been more generous, offering benefits based on a fraction of final earnings multiplied by number of years in a scheme. Guaranteed minimum pensions earned from April 1988 onwards have had to provide for increases after retirement in line with the Retail Price Index subject to a ceiling of 3 per cent per annum. The state scheme is responsible for adjustments for higher levels of inflation.

By contracting out of SERPS, employees typically reduce their National Insurance contributions (NICs) by 2 per cent on earnings between the lower and upper earnings limits. Employers also enjoy reductions in their NICs. (For a detailed discussion of SERPS, see Creedy and Disney (1988).)

Defined Contribution Schemes

Before the 1986 Act, only defined benefit schemes could contract out of SERPS. The Act allowed defined contribution plans to contract out for the first time. While the returns to employees from defined benefit schemes depend on their earnings growth and level of earnings at retirement, those from defined contribution schemes depend entirely on the rate of return on the assets bought by the plan and on the annuity rate available on retirement. The advent of personal pensions, which are individual contracts of this kind, has gained the most publicity, but the Act also made provision for group defined contribution plans ('Money Purchase Schemes') to contract out of SERPS in industries and occupations not presently covered by contracted-out occupational pension schemes.

Defined contribution schemes enjoy tax advantages very similar to the defined benefit schemes already discussed. Contributions are exempt from tax, as are the income and capital gains of the investment fund and the lump sum on retirement. The limits on tax relief for personal pensions are rather different, however, and are basically defined by maximum contribution rates which vary with age. Those under the age

of 36 can contribute up to 17.5 per cent of their salary, those between the ages of 36 and 45 20 per cent of salary, 46- to 50-year-olds 25 per cent, 51- to 55-year-olds 30 per cent, 56- to 60-year-olds 35 per cent and 61- to 74-year-olds 40 per cent. These are all subject to the £75,000 ceiling on earnings. Finally, the limit on the size of the tax-free lump sum, while defined as 1.5 times final earnings for company-run defined contribution schemes, is 25 per cent of the value of the accumulated fund for personal pensions. Prior to the 1989 Budget, this limit was set at £150,000.

Taxation of Other Savings

In explaining or making any assessment of the taxation of pensions, it is important to put it into the context of the taxation provisions for other forms of saving. In the chapters that follow, the costs of various forms of tax treatment of pensions are examined in close conjunction with the tax treatment of other savings. To some extent the reason for this is clear. It is largely because pensions are taxed differently from other types of saving that there is interest in, and debate about, the way in which they are taxed.

Perhaps the most obvious comparison is with 'saving' through SERPS, since private pensions are a direct alternative to it. The tax treatment of private pensions is clearly advantageous since SERPS contributions cannot be offset against taxable income of employees, though they can be set against that of employers, and there are no provisions for a tax-free lump sum on retirement. It is difficult to make direct comparisons, however, because in the state scheme the relationship between contributions and benefits is slight and the scheme is not funded.

In the more general context of savings and financial assets, private pensions occupy a position of fiscal advantage relative to almost all other assets, at least for basic-rate taxpayers (see Hills (1984) and Saunders and Webb (1988)). The only other major asset which comes close to them on a measure of degree of fiscal privilege used by Hills and Saunders and Webb is owner-occupied housing with mortgages. This enjoys tax relief on interest payments (on debt up to £30,000) and is exempt from capital gains tax. Otherwise, most interest-bearing assets such as bank and building society accounts are bought from taxed income and have tax charged on nominal returns, while benefits from them are not taxed, thus facing the TTE regime of our earlier

discussion. Personal Equity Plans (PEPs) and Tax-Exempt Special Savings Accounts (TESSAs), by contrast, are bought from taxed income but both their returns and benefits from them are tax-exempt, thus facing a TEE regime.

As we showed earlier, a TEE regime is practically identical in its effect to the EET type regime faced by private pensions. However, both PEPs and in particular TESSAs have a number of very limiting conditions on them. Furthermore, private pensions diverge from the EET treatment in having available the tax-free lump sum.

These and other different tax regimes are summarised and put into some context in Table 6.1 which shows how different assets are taxed.

TABLE 6.1

The Current Tax Treatment of Saving — A Summary

Asset type	Tax status relative to Expenditure Tax	Reasons
Owner-occupied housing	Privileged	<ul style="list-style-type: none"> • No tax on imputed rental income • Capital gains on principal residence exempt from capital gains tax • Tax relief at basic rate for first £30,000 of mortgage • No surviving value-based property tax since abolition of domestic rates (but Council Tax to be introduced)
Pension funds	Mildly privileged	<ul style="list-style-type: none"> • Tax relief at marginal tax rate on contributions to approved schemes • Interest, dividends and capital gains not taxed • Part of pension can be taken as tax-free lump sum at retirement, but regular payments are taxed
Life assurance post-1984	Mildly penalised	<ul style="list-style-type: none"> • Most policies pay out tax-free lump sum so tax status depends on length of policy • Income and gains attributed to policy holders taxed at the basic rate
Bank accounts	Heavily penalised	<ul style="list-style-type: none"> • Returns fully taxable, no relief for inflation • Some special types of account, TESSAs, whose returns are tax-relieved
Direct equity holding	Mildly penalised	<ul style="list-style-type: none"> • First £5,800 capital gains exempt from capital gains tax • Capital gains tax relief on inflation component above that
PEPs	Equal	<ul style="list-style-type: none"> • Dividends taxable in full • Saving out of taxed income • No tax on return
TESSAs	Equal	<ul style="list-style-type: none"> • Saving out of taxed income • No tax on return

CHAPTER 7

MEASURING THE TAX COSTS OF PENSION SCHEMES

Introduction

As we have seen, private pensions in the UK attract a number of important tax reliefs. Partly as a result of this favourable tax treatment, occupational and personal pension funds take an extremely important part of total savings in the UK. The result is that it is often felt that the cost of taxation support for pension schemes is very high. That is, the fact that pensions are treated relatively favourably for tax purposes means that less tax is raised than would have been raised if this favourable treatment were to be withdrawn. These costs are often referred to as tax expenditures.

The idea of a tax expenditure is based on the fact that support for a particular activity through the tax system imposes demands on public revenue in exactly the same way as does explicit public expenditure. Perhaps the most obvious example of where this is so relates to the choice between child benefit and child tax allowances as a means of helping families with children. Child tax allowances do not form an explicit part of public expenditure but nevertheless cost the exchequer money in forgone tax revenues. That is not to say that in some circumstances there are not serious difficulties with the concept. In particular, the assessment of a tax expenditure in some circumstances may require some concept of what the tax system ought to be if there were no tax expenditures. This can certainly be a problem in estimating tax expenditures on pension schemes where there is no obvious bench-mark.

Issues in Measuring Tax Expenditures

The question to be addressed here relates to how these tax expenditures are to be adequately defined and measured. Significant problems relating to their definition and measurement exist, not least because occupational pension schemes involve transactions which occur over a long period of time. The most immediately obvious and frequently quoted estimates of tax expenditures on pension schemes relate to the amount that would be raised in any one year if, instead of being

tax-relieved, all contributions, investment income etc. were to be taxed at the marginal tax rate of the contributor. The Inland Revenue publishes each year a table of the estimated cost of tax reliefs calculated on this basis. The relevant estimated costs for 1989–90 are shown in Table 7.1, from *Inland Revenue Statistics 1990*.

TABLE 7.1

Tax Expenditures Calculated by the Inland Revenue

Relief	Estimated cost (£ million)
Pension contributions	5,700
Investment income of pension schemes	4,400
Lump-sum payments to pensioners	1,000
Personal pension contributions	800

The most obvious problem with measuring the costs of tax reliefs like this is that one cannot reasonably add together the costs of relief on contributions and investment income to produce a total cost. To tax both these and to maintain the taxation of pensions in payment would imply a substantial degree of double taxation. This emphasises the need for some bench-mark of comparison.

A number of other problems with this rather simplistic approach towards estimating the cost of tax reliefs exist. The first relates back to our previous comment that one of the reasons for the importance of the occupational pension sector is the fact that it has a tax-privileged status. If this tax-privileged status were to be reduced or withdrawn, it is virtually certain that the amount of saving done through pension schemes would fall. For example, Hills (1984) has shown that the distribution of savings in different forms bears a very strong correlation to the degree to which the form of savings is favoured by the tax system. Hence the cost of the reliefs would be less than shown in Table 7.1 because some of the contributions and investment income exist just because of the tax-privileged status of pensions.

Secondly, it is important to take account of the fact that pension contributions today will eventually lead to pension payments in the future and tax may be levied on these payments. Not only does this mean that pension rights held today will result in extra taxes in the future, but it also means that the more tax-advantaged pension contributions are today, the more tax revenue is likely to be raised eventually. In measuring the cost of tax reliefs, then, it is important to look at the issue

over an extended period — for any individual, this period would have to stretch from his first contribution to the last pension payment at his death. This clearly raises a number of problems relating to the measurement of the present value of incomes spread over a long period, and the rate of discounting to use, among others. However, to avoid rather spurious snapshot estimates, some attempt has to be made to overcome these problems.

Finally, any estimate of the exchequer costs of tax relief requires some assumption about what alternative method of saving would be used if pension schemes were not available or lost some of their tax privileges. For example, if another form of saving existed with the same tax advantages as pension schemes, then it is likely that most money now invested in pension schemes would be invested in that alternative tax-privileged asset, were the tax privileges of pension schemes to be withdrawn. In that case, the opportunity cost to the government of keeping the tax-privileged status of the pension scheme is likely to be very low. Alternatively if the only other means of saving involved saving out of taxed income and having the interest on the savings taxed as well, then the opportunity cost to the government of the pension schemes would be high.

In practice, a range of alternative vehicles for saving exist into which pension contributions might be diverted, the most obvious alternatives being Personal Equity Plans (PEPs) or Tax-Exempt Special Savings Accounts (TESSAs), both of which provide tax-free investment income (subject to some fairly stringent conditions, particularly in the case of TESSAs), but which do not attract tax exemption for contributions. Ordinary building society accounts, by contrast, offer neither tax-exempt contributions nor tax-exempt interest payments. Of course, none of these forms of saving is directly comparable to pension schemes which offer guaranteed annual incomes from retirement until death, whenever that might occur. For a direct comparison, one might want to look at the tax consequences of saving in one of these forms until retirement and then purchasing an annuity with the outstanding balance.

A number of issues have been raised, then, regarding the tax cost of pension schemes. The first important conclusion is that one must look at the cost over the whole lifetime of a contributor, otherwise the costs are overestimated because no account is taken of extra tax revenue raised when the contributor receives income in retirement. Secondly, it is necessary to use some other form of saving as a bench-mark of

comparison for costs. If some tax relief is available elsewhere, the government cannot expect to raise all the tax apparently forgone if all the tax advantages of pension schemes are abolished. A final issue, which we shall not pursue in detail here, relates to the degree to which saving through pensions would be substituted into other forms of saving as opposed to being used for immediate consumption.

Possible Methodologies

The above discussion gives some indication of the direction in which one would want to go in measuring tax expenditures on pensions. A workable methodology remains to be found.

The first point to become clear is that the figures produced by the Inland Revenue and reproduced in Table 7.1 are not in any way useful as estimates of tax expenditures on pension schemes. They take account of none of the problems associated with measuring expenditures which have been considered. It is in fact rather hard to think of any useful purpose to which these figures might be applied.

In fact the Inland Revenue, recognising the problems inherent in this way of measuring tax expenditures, has produced new estimates on a different basis (Inland Revenue, 1991). This takes the existence of unapproved schemes as a bench-mark for comparison. In unapproved funded schemes, employee contributions are paid out of taxed income and employees are chargeable to tax under Schedule E on any payments made to the scheme by the employer, although the employer's contributions qualify for a deduction as a business expense. The income and gains of funds are chargeable to tax, usually at the basic rate. All benefits can be taken as a tax-free lump sum, though benefits in the form of an annual pension would be taxable.

The Inland Revenue then uses this as a bench-mark with which the approved schemes can be compared. Thus a total cost of relief for funded approved schemes is then calculated by summing the tax reliefs on contributions by employees and employers and on funds' investment incomes and then taking off tax liabilities on pensions in payment in the year in question.

This takes account of some problems mentioned above, particularly in subtracting the tax in payment from the total of tax reliefs and thereby taking account of the fact that tax-relieved payments to schemes result in tax payments eventually. However, it still suffers from some problems. By taking tax on pensions in payment at the present time

from the reliefs currently being enjoyed by the contributions and investments, some of the dynamics of the situation are lost. Ideally it would be preferable to estimate what tax payments would be made on the pension eventually earned by the contributions now being made. In an occupational pension system in equilibrium, this would not matter, but at a time when funds are still building up, the cost of tax relief will be overestimated. To see this, consider the introduction of a new pension scheme. Initially there will be tax costs associated with contributions and investment incomes but there will be no offsetting tax receipts from pensions in payment. But the expected flow of tax receipts from the pensions once they are in payment ought to be taken into account.

Knox (1990a) tries to overcome some of the problems outlined by examining in detail the position of a single employee under a set of assumptions about earnings, earnings growth, rates of return on investment, life expectancy and so on. In doing this, he compares the tax payments to the government over the period from the first contribution until death that would be made under three different savings methods — a pension fund, a PEP and an ordinary interest-bearing bank or building society account. The cost to the government of the relief for the pension scheme can then be shown as the difference between the tax that would be received from equal saving (equal in the sense of equal cost to the employee) in the pension scheme and through either of the other savings methods. This allows an estimate of the cost of the tax-privileged status of the pension scheme, for an individual over the period of application, to be made relative to the other forms of saving. This cost can be expressed in pounds at present value or as a percentage of the accumulated pension benefit.

This method yields a number of interesting results, not least confirming the belief that the estimated cost to government depends to a large extent on the bench-mark used for comparison and on whether or not extra tax to the government after retirement is included in the calculation. The estimated cost also differs quite significantly according to exactly what assumptions are made about, for example, contribution rates, interest rates and inflation rates.

This method of itself does not give an estimate of the annual cost of total reliefs for occupational pensions. However, using a similar method and presenting costs as a percentage of contributions whilst knowing roughly the level of contributions to pension funds allows one to go on to estimate the annual cost to the government. (This method is valid

only if the current distribution of members is typical of the long-term membership.) Knox finds the annual cost to be between £2.2 billion and £12 billion on his assumptions, depending on which bench-mark of comparison is used. Given that funds would be likely to move to the next most privileged form of investment, the lower of these figures may be closer to the 'true' cost.

This basic methodology is clearly useful, but suffers from a number of problems if a realistic assessment of the level of the tax expenditures is required. The most important of these is that the results are sensitive to a whole list of detailed assumptions (as mentioned above). These assumptions include ones regarding the sex, income, contribution rate and marital status of the contributors, as well as ones regarding future inflation rates and so on. To reach a more reliable estimate of the cost, one would want to apply a similar methodology to actual individual data which would give an accurate picture of the characteristics of people contributing to pension schemes and the amount contributed.

Importantly a similar method (whether calculations are based on assumptions or on actual data) can be applied to each one of the tax advantages associated with pension schemes. This allows estimates of the revenue consequences of a range of possible reforms to be made. These estimates regarding particular changes may themselves be of more use than the overall estimates of total tax expenditures.

In the next two chapters, we apply this basic method first, as Knox does, to example individuals and then to a detailed sample of people with occupational pensions.

CHAPTER 8

THE COSTS OF PENSION TAX RELIEFS: A HYPOTHETICAL MODEL

As discussed previously, the cost to the government of somebody being a member of an occupational pension scheme depends on the bench-mark of comparison used. Here we try to estimate the cost for one person relative to two alternative bench-marks — one in which there is tax relief on investment income but no tax relief on contributions as in a PEP or a TESSA, and one in which no tax relief is available either on contributions or investment income as in an ordinary interest-bearing savings account.¹ In doing this, we omit other possible savings media, the most important of which is housing which has a number of important tax advantages associated with it. To that extent the results are incomplete but they remain of value.

To aid and simplify the construction of the model and to allow comparisons to be made, it is assumed that the pension scheme is a defined contribution scheme rather than a defined benefit scheme. This means that the proportions of income invested can be kept constant and leads to the working of the pension scheme appearing to be much more like the other savings options discussed.

The method used is to compare the tax consequences of the situations in which an employee makes equal-cost contributions to the three different savings media over a specified period of time. This is slightly complicated by the importance of employer contributions to pension schemes. A number of ways of dealing with this exist. Here it is assumed that under the alternative systems the employer pays the same gross amount to the employee as would have been paid into the pension fund. The employee then invests the after-tax amount in the alternative savings medium. It is assumed that the cost to the employee remains the same in each case — that is, a pre-tax amount is contributed to the pension scheme, the post-tax amount to the PEP or savings account.

As an example, assume gross pay is £100. The employer pays 6 per cent of gross pay into a pension fund, the employee 4 per cent of gross salary. Thus £10 would be contributed in total. We compare this with a

¹ The methodology described and used owes much to Knox (1990a), for whose assistance we are grateful.

contribution to the other savings vehicles of $\pounds 100 \times \{(1 - \text{Tax rate}) \times 0.06 + (1 - \text{Tax rate}) \times 0.04\}$, which is $\pounds 7.50$ in the case of a basic-rate taxpayer, $\pounds 6$ in the case of a higher-rate taxpayer.²

This provides a procedure for calculating a cost for a particular member of a scheme for a particular year. It can be extended to determine a cost over the lifetime of an individual. This requires two extra dimensions to be added to the analysis. The first involves the introduction of costs over time. This requires assumptions to be made about future inflation and earnings growth rates, and also requires some assumption about funding rates for the government. In other words, account has to be taken of the effect on future government income of income forgone today if that income could have been used to earn real rates of return. Secondly, account needs to be taken of the position of the present employee when he is retired, for he will then be paying tax on the pension he receives from the fund. For the purposes of comparison, it is assumed that on retirement the money built up under the PEP and savings account scenarios is used to buy an annuity. In each case, it is assumed that the basic state pension is received in addition to that received from the investments discussed here.³ The amount of other income affects the amount of tax payable on the income received from the pension or annuities because of the existence of personal tax allowances.

A model based on these assumptions can tell us something about the costs of tax expenditures on pension schemes. But it is important to remember that the assumptions set out in Table 8.1 are purely illustrative and not necessarily representative of all those in pension schemes. The main purpose of the calculations performed here is to show relative magnitudes only and to help clarify the calculations performed in the next chapter on the basis of a representative sample of the population, which will give us our final results.

It should be noted that our assumption of constant cost to the employee is quite restrictive. It is quite possible that savings would be increased to offset the tax losses incurred if the tax privileges associated with pension schemes were withdrawn. Alternatively this might have the effect of rendering saving so much less worthwhile compared with current consumption that less saving would be done.

² This differs from the methodology of Knox, who treats the employer contribution in the same way but assumes the full 4 per cent contribution from the employee. This appears inappropriate if we wish to assume equal cost to the employee.

³ We ignore SERPS at this stage, but will include it in our further work.

TABLE 8.1

Assumptions for Base Run

Investment earnings rate	12% p.a. gross
Salary increase rate:	
Inflation	6% ^a
Productivity increases	1.5%
Promotion increases	1.5%
Personal allowance and state pension increase rate	7.5%
Government funding rate	10.5%
Contribution rates:	
Employer	6%
Employee	4%
Initial salary	£15,000 p.a.
Tax-free lump sum	1.5 × Final salary
Term of investment	30 years
Life expectancy at 65	14 years
Male annuity rate at age 65:	
Indexed	8% of initial sum
Level	14% of initial sum

^a Average inflation over the last 10 years has been 6.8%, over the last 20 years almost 10%.

A set of base assumptions concerning earnings growth rate, inflation, government funding rates, income and so on are shown in Table 8.1, and calculations based on these assumptions are shown in Table 8.2. The effects of changing the particular assumptions are discussed later.

As one would expect, the accumulated benefit at age 65 from a PEP is exactly three-quarters that from the pension scheme, since at a basic rate of 25 per cent only three-quarters as much money is invested, while the savings option yields less than half what the pension fund would yield. It is assumed in each case that 1.5 times final salary is taken out upon retirement and not taxed.

The income to the government before age 65, set at zero in the case of the pension, shows how much extra tax is received in the other two cases. (All figures are in current prices.) Finally income to the government after age 65 and in total are shown for both an indexed and a level annuity. Given the assumptions, one can see a lifetime cost

to the government as the difference between total income under the pension scheme and that under either of the other two schemes.

TABLE 8.2

Results Based on Assumptions in Table 8.1

	Pension fund		PEP		Savings account	
Benefit at age 65	165,304		123,978		80,269	
Lump sum	51,256		51,256		51,256	
Available pension	114,049		72,723		29,013	
Pension available:						
Level pension	15,967		10,181		4,062	
Indexed pension	9,124		5,818		2,321	
Government income pre-65	0		33,075		71,506	
	<i>Indexed</i>	<i>Level</i>	<i>Indexed</i>	<i>Level</i>	<i>Indexed</i>	<i>Level</i>
Government income post-65	17,513	24,088	452	3,438	0	0
Total income	17,513	24,088	33,526	36,513	71,506	71,506

For an indexed annuity, the cost works out at £16,013 against the PEP bench-mark or £53,993 against the savings account bench-mark. This brings out strongly the importance of the bench-mark of comparison. The cost in relation to one is more than three times that in relation to the other. An alternative measure of the cost shows it as a percentage of accumulated occupational pension benefit. This figure can be interpreted as a measure of the proportion of the benefit that has been 'provided' from taxation support. On the PEP bench-mark, this works out at 9.7 per cent; on the savings account bench-mark, 32.7 per cent.

This calculation can be done on a range of assumptions about income, contributions, term of investment, rate of price increase and so on. This example is purely illustrative. However, it does bring out some interesting points about the costs involved in terms of the taxation support of an individual in an occupational pension scheme. Summary measures both in money terms and as a percentage of accumulated occupational pension benefit of the effects of changing a number of the assumptions are shown in the tables that follow. In each case, it is assumed that an indexed annuity is purchased, and this is the basis of comparison.

Table 8.3 shows the costs involved for individuals at various income levels. Keeping the other assumptions constant, the results for all paying the basic rate of tax are similar in terms of percentage of accumulated benefit, though clearly increase in monetary terms as more is contributed and therefore more enjoys the tax advantages. But there is a large increase in the costs involved for higher-rate taxpayers. For somebody earning £30,000 per annum, the lifetime cost to the government increases to £66,000 on the PEP bench-mark or £150,000 on the savings account bench-mark. As proportions of accumulated benefits, these are 20.1 per cent and 45.2 per cent respectively. This is a clear indication of the way in which the present arrangements favour higher-rate taxpayers. Through offering more relief on contributions, and effectively greater relief on fund income, the government provides a greater proportion of the benefit for the richest taxpayers. At the highest income level shown, the pension paid would not be high enough to have higher-rate tax paid on it. Even were those paying higher-rate tax during working life to be higher-rate payers in retirement, the benefit to them would still be greater than to basic-rate payers. This is because all contributions are relieved at the highest marginal rate, whilst only those benefits in excess of the basic rate limit are charged at the higher rate and so even most higher-rate taxpayers in retirement would pay the majority of their tax at the basic rate.

TABLE 8.3

Costs at Various Income Levels

Measure of cost relative to:	Income level (£ p.a.)			
	10,000	15,000	20,000	30,000
PEP				
£	12,000	16,000	26,000	66,000
%	11.2	9.7	11.8	20.1
Savings account				
£	38,000	54,000	86,000	150,000
%	34.5	32.7	39.2	45.2

One assumption which has a considerable impact on the tax costs relative to the savings account bench-mark is that of the rate of inflation. Because the tax on investment income is charged on the *nominal* return from savings in bank and building society accounts, with higher inflation rates but the same real rate of return more tax is raised. The consequence is that if instead of assuming a rate of inflation of 6 per

cent we assume zero inflation, the return to the government from the savings account bench-mark falls considerably. Hence the cost relative to savings falls. Table 8.4 shows the effects of different inflation rates when other variables such as the rate of return, personal allowance increases and government funding rate are kept constant in *real* terms. With zero inflation, the cost falls to 21.3 per cent of accumulated benefit, but it climbs to 37.1 per cent at 10 per cent inflation.

TABLE 8.4

Costs at Various Inflation Rates

Measure of cost relative to:	Inflation rate		
	0%	6%	10%
Savings account			
£	35,000	54,000	62,000
%	21.3	32.7	37.1

This example illustrates quite graphically the point that the present tax treatment of ordinary savings is not a Comprehensive Income Tax treatment because nominal, and not real, returns are taxed. Clearly with low real rates of return and only moderate inflation, this can result in the post-tax real rate of return being negative.

Table 8.5 shows how costs change according to the length of investment term. For short terms the cost relative to a PEP rises sharply, being as much as 23.3 per cent of accumulated benefit over a 10-year term, but it falls to just 5.8 per cent if the term is extended to 40 years. This is mainly a result of the action of compound interest in greatly increasing the value of the fund available when the investment term is increased, while the monetary cost goes up only linearly. The interaction of the two effects explains why the cost relative to savings rises and then falls as a proportion of accumulated fund.

Just some of the possible changes to the base assumptions have been shown. Changes might be made to other parameters, but we do not go through these in detail. Altering the real rate of return has results similar to those shown in Table 8.4 from changing inflation rates, while the effect of changing annuity rates is to alter pensions received. Hence increasing annuity rates reduces the cost because the pension and hence taxation revenue increase.

TABLE 8.5

Costs over Different Term Lengths

Measure of cost relative to:	Period of investment (years)			
	10	20	30	40
PEP				
£	5,000	15,500	16,000	20,000
%	23.3	21.6	9.7	5.8
Savings account				
£	8,000	28,000	54,000	109,000
%	32.1	38.5	32.7	32.0

These calculations based on a large range of assumptions about the circumstances of particular individuals are especially valuable in clarifying some of the issues involved in measuring the costs of the tax treatment of pensions. Notably they show just how important is the bench-mark of comparison. They show the importance of including the post-retirement tax on pensions in any calculations. Furthermore we have graphically illustrated the importance of the rate of inflation in the taxation of nominal investment income, and shown how much more important tax support is to higher-rate taxpayers than to basic-rate taxpayers.

In the next chapter we go on to apply a similar method to actual data in an attempt to estimate overall costs and the revenue consequences of sensible reforms.

CHAPTER 9

THE COSTS OF PENSION TAX RELIEFS: A REPRESENTATIVE MODEL

Introduction

An attempt is made here to model the costs of the tax advantages enjoyed by occupational pension schemes, using data on actual individuals who are in such schemes. Data from the 1986 Family Expenditure Survey (FES) are used for this purpose and the sample of those appearing to be in an occupational pension scheme is taken. Their earnings are then projected back to the point at which they entered the labour market and forward to the point at which they will leave the labour market. This earnings information is used to predict the amount contributed to pension schemes and the amount received in pensions by each individual.

Use is made of work by Disney and Whitehouse (1991) which allows industry-specific earnings profiles for each man in the 1986 FES to be estimated. These individual earnings profiles are then combined with information on real earnings growth in the past — and predicted real earnings growth at 2 per cent per annum into the future. This allows us to produce an individually estimated level of real earnings for each year between labour market entry and retirement for each man in the 1986 FES who is in an occupational pension scheme.

Since extensive use is made of these data, a brief description of the method used in predicting the earnings levels is in order. The modelling was based on a 10-year pool of FES data from 1977 to 1986 and the running of wage equations on a preferred set of industry–occupation groupings, with wages being determined by a set of factors such as age, educational status and a time trend. The FES years used provided nine education and 34 industry categories, giving a total of 306 possible industry–occupation combinations. Where appropriate these were aggregated into blocks to provide a subset of equations representing an optimal degree of disaggregation of occupations and industries. Separate estimates of the effects of each of these characteristics were then made for the chosen industry–occupation groups.

This information was then combined with information on wage

growth over time for different occupational groups to construct age-earnings profiles for each cohort in the labour market, thereby allowing both retrospective derivations of earnings histories and forward-looking analysis of individual earnings.

We take somebody to be in an occupational pension scheme if either they are recorded in the FES as making superannuation contributions, or if the level of their National Insurance contributions is such that they appear to be contracted out of SERPS.¹ The combination of these two factors in determining scheme membership allows us to distinguish both those who are in contributory pension schemes (those with recorded superannuation payments) and those who are in non-contributory schemes (those without superannuation payments). On this basis, 86 per cent of our sample appear to be in contributory pension schemes and 14 per cent in non-contributory ones; these compare with figures of 87 per cent and 13 per cent recorded by the 1990 NAPF Annual Survey of Occupational Pension Schemes (p. 6, Section 2.3.1). Grossing up the numbers to population totals gives a total number of occupational pension scheme members of around 10.5 million, very close to the actual number of scheme members.

It is on the basis of this information that the rest of the analysis proceeds. It clearly suffers from a number of problems. Firstly, we can only proceed on the basis of those currently contributing to a scheme, ignoring those who have rights to occupational pensions whilst not at present making any payments. Secondly, we cannot tell which of those in our sample will have interrupted working careers through unemployment or ill health at some point in their working life. Women, in particular, are likely to have significant gaps in their working lives, making their lifetime earnings profiles very hard to predict. The only way in which we are able to take account of this is by assuming that some women are likely to stop contributing to pension schemes a number of years before the pension becomes payable. Finally, an assumption has to be made about the level of real earnings growth into the future. For our base run we assume 2 per cent annual real earnings growth from now on.

It is also worth noting that there is one other potential cost to government of changes to the tax system that we are not able to model. This relates to the possibility that changes to the tax regime would result

¹ This methodology will miss those few schemes that are both non-contributory and contracted in.

in such a large reduction in saving for retirement that future spending on income-related benefits for pensioners would have to increase substantially. It seems likely that any such effect would be minimal if a tax change simply induced people to move their savings to other assets which they still kept to provide retirement income. If savings for retirement fell dramatically, the impact on expenditure might be greater but the effect would be hard to measure.

Estimating the Costs

On the basis of these data, then, the total costs of the various tax reliefs associated with private pensions are estimated using a methodology similar to that outlined in the previous chapter for example individuals. First, however, the reliability of the original data may be tested by estimating the annual cost of tax relief on employer and employee contributions in exactly the same way as was done by the Government in *Inland Revenue Statistics* until 1990. That is, for all those in a scheme, their marginal tax rate is multiplied by the level of their contribution to estimate a cost for employee contributions. The level of contribution is taken to equal recorded superannuation payments. For employer contributions we take the average contribution rates recorded in the NAPF annual survey, namely 8.1 per cent of earnings to contributory schemes and 13.3 per cent to non-contributory schemes (p. 6, Section 2.3.2). Grossing up the sample to reflect the size and composition of the population as a whole, and bringing the data forward to the present day by multiplying costs based on the 1986 data by the rate of price increase since that time, results in an estimated annual cost of tax relief for employee contributions of around £1.8 billion and for employer contributions of around £4 billion. These compare with published estimates in the 1990 *Inland Revenue Statistics* of £2.2 billion and £3.5 billion respectively. We appear to have a slight underestimate of the cost of employee contributions and a slight overestimate of the cost of employer contributions. The differences, however, are not great and the total cost is remarkably similar to published estimates.

The purpose of the main part of this exercise will be to make data-based estimations of costs on a similar basis to that used in the previous chapter. To that end, further assumptions need to be made. In particular, assumptions need to be made about level of benefits received, length of time spent in the schemes, age at retirement, life expectancy, future inflation rates and discount rate. The assumptions

Taxation of private pensions

we use in our base analysis are set out in Table 9.1. For simplicity we allow just two retirement ages, either 60 or 65. It is assumed that two-thirds of men retire at 65 and one-third at 60 while two-thirds of women retire at 60 and one-third at 65. These proportions correspond approximately to the spread of retirement ages shown in the NAPF survey (Section 3.4.1, Table 52). Again for simplicity we assume all receive one-sixtieth of their final salary as a pension per year of pensionable service, this being by far the commonest basis of pension calculation. Hence someone in a scheme for 40 years would receive two-thirds of final salary as a pension.

TABLE 9.1

Assumptions for Base Analysis

Male life expectancy	74
Female life expectancy	80
Male retirement age	$\frac{2}{3}$ at 65, $\frac{1}{3}$ at 60
Female retirement age	$\frac{1}{3}$ at 65, $\frac{2}{3}$ at 60
Discount rate	1.7%
Benefit level	Final salary \times Years in scheme \div 60
Average time spent by men in scheme	26 years
Average time spent by women in scheme	20 years
Average time between leaving scheme and retiring (men)	7.5 years
Average time between leaving scheme and retiring (women)	15 years
Inflation rate	6%

When considering the availability of tax-free lump sums up to a maximum of 1.5 times final earnings, the pension payable is reduced by a fixed amount according to age. The available lump sum itself depends upon length of service, since companies are not generally willing to give lump sums up to the maximum permissible for tax purposes if this uses up all or most of the available pension. In the majority of schemes, a lump sum of three-eighths of final salary for each year of scheme membership is payable. Thus only somebody who had been in a scheme for 40 years would be eligible to receive the full tax-free lump sum of one-and-a-half times final earnings. Receipt of a lump sum reduces the available pension by fixed amounts according to age and sex. For a 65-year-old man the annual pension is reduced by

one-ninth of the amount of the lump sum. The equivalent fraction for a 60-year-old man is $\frac{1}{10.2}$, for a 60-year-old woman $\frac{1}{11}$ and for a 65-year-old woman $\frac{1}{9.8}$. Hence a man retiring at 65 with 30 years' service could receive a lump sum of nine-eighths of his final salary and a pension of half his final salary less one-ninth of the lump sum, i.e. a pension of three-eighths of final salary.

Account is taken of the fact that most people will not spend the whole of their working lives in a pension scheme by varying the number of years spent in a scheme such that the average length of time spent in a scheme works out at approximately 26 years for men and 20 years for women. These figures are close to, though slightly above, the average scheme membership lengths recorded in the DSS Retirement Survey (DSS, 1992). Although no account is taken of the possibility of moving between schemes, account is taken of the fact that a number of scheme members, particularly women, are likely to stop contributing to the schemes before retirement. This is reflected in the average length of time between leaving the scheme and retirement, and the effective reduction in benefit that this usually implies.

It is important to note that a major distinction between the analysis carried out here and that contained in the previous chapter looking at individual examples is that here we are examining defined benefit pension schemes rather than the defined contribution schemes of the previous analysis. This change has a number of implications. To some extent, it makes the exercise of comparison with other savings media more difficult, or at least less clear. As described above, the level of pension is determined as a multiple of final salary. It is assumed that this pension will be paid until death, but falling in value by 1 per cent per year to take account of the fact that on average pensions are not fully indexed. The Government Actuary's Department report for 1983 finds that on average pensions in payment were increased by 80 per cent of the level of inflation. With inflation at 6 per cent, this underindexation is roughly equivalent to a 1 per cent fall in the real value of the pension paid each year. The NAPF survey also reveals that around half of occupational pensions are 'integrated' with the state scheme. In general this means deducting the level of the basic state pension from the earnings on which the pension is calculated.

Given that the contribution pattern which we are assuming will remain constant as a proportion of earnings, the effect of having the actual level of pension determined *ex ante* is that the rate of return on investment has to be calculated to allow the funds to fulfil their

obligations. That is, the rate of return on investment is not a parameter but is calculated from other parameters. That it should work out at a plausible rate is another test of the model. Given our base assumptions, it works out at 1.7 per cent per annum, which is also used as the discount rate shown in Table 9.1.

The life expectancies for men and women shown in the table are life expectancies at age 40, the average age of those in our sample, rather than life expectancy at retirement. In the calculations, account is also taken of inheritance of pensions by widows. They are assumed to inherit half of their husband's pensions. Since, for the purposes of our model, we assume all women live longer than all men, the question of widowers' pensions does not arise.

As before, we compare the tax effects of occupational pensions with those of Personal Equity Plans (PEPs) and ordinary interest-bearing savings accounts. For purposes of comparison, we assume again that on retirement, savings made through one of these media are used to purchase an indexed annuity. Depending on the rate of interest as they do, the annuity rates are also worked out by the model rather than given as parameters.

The income accrued under the three alternative savings media is calculated based on the contributions made over the period in question and the different tax treatments of the contributions and investment income for each form of savings. The sums involved are enormous. Around £780 billion accumulates as the pension fund, £560 billion from the PEP and £340 billion in the ordinary savings account. All the figures are in current prices. These numbers are the sum of the totals contributed by each individual and the interest thereon over the whole period for which each individual is making contributions. As such, they are numbers that would represent the situation in a fund at the end of a period in which people had been contributing and no pensions were being paid. These funds are then used to pay the pensions or annuities of those who have contributed. In this sense, we are treating our sample of people of varying ages as if they were a single cohort. The same process applies when calculating the tax costs. In this case, costs and benefits from each year after the initial year of entry into the labour market are deflated by the discount rate to the year of entry. To make all the figures comparable, these figures for costs and benefits are then brought forward to the present date using the same discount rate.

Table 9.2 shows the total fund accrued under each form of saving and the total tax payments under each scheme where tax payments under

the pension scheme are set at zero. Hence the tax appearing under the PEP could alternatively be considered as the level of tax relief on contributions enjoyed by the pension scheme. The tax payment in respect of the savings account represents the tax on contributions and on investment income. Again the numbers over the full period are rather too big to be meaningful. Dividing the tax numbers by the average number of years between entry into the labour market and death gives an estimate of the annual amounts of tax paid. The choice of period by which the total should be divided is important. Extending the period to death rather than retirement allows comparisons to be made with income flows after retirement and for all annual costs to be put on a consistent basis. Starting at labour market entry rather than entry into the scheme is clearly necessary, for otherwise the annual cost would increase if people made the same level of contributions but over a shorter period. Overall since we are looking at our sample over the period from their labour market entry to their death, as a single cohort from the occupational pension point of view, the whole period is the appropriate one for use in annualising costs.

TABLE 9.2

Some Pre-Retirement Income Flows

	<i>£ billion</i>		
	Pension	PEP	Savings account
Eventual fund	780	560	340
Total tax	0	140	290
Annual tax	0	2.4	4.9

The relevant average, then, by which the totals have to be divided is 59. This gives an annual tax of £2.4 billion from the PEP and £4.9 billion from the savings account. That is, looking just at the income flows before retirement, the tax reliefs applicable to occupational pension schemes are worth £2.4 billion per year relative to a PEP or £4.9 billion relative to ordinary interest-bearing savings accounts.

As we have already seen, however, to gain a meaningful estimate of the tax costs of pension schemes requires one to look at the post-retirement situation in addition. Table 9.3 shows the levels of pensions and annuities paid under the different regimes and the amount of tax payable on each. The situations under which a lump sum, of the size described earlier, is taken and is not taken are both shown.

TABLE 9.3

Post-Retirement Income Flows

	Pension	PEP	Savings account
Average lump sum per person	£17,000	£17,000	£17,000
Average initial payment per person			
Lump sum taken	£4,600	£3,700	£1,600
No lump sum	£6,100	£5,500	£3,400
Total tax paid			
Lump sum taken	£75 bn	<£0.5 bn	<£0.5 bn
No lump sum	£115 bn	<£0.5 bn	<£0.5 bn
Annual tax			
Lump sum taken	£1.3 bn	—	—
No lump sum	£2.0 bn	—	—

Table 9.3 contains a number of results. It shows again how different can be one's pension entitlements depending on the tax treatment of one's investments. With a lump sum taken, only a third as much is received annually in retirement by somebody who invested money in a building society as by someone who invested, at the same cost to himself, in a pension scheme. The figures also give some indication of the tax costs associated with the tax-free lump sum available from pension schemes. If the maximum lump sum is taken, then the total tax payments under the pension scheme amount to some £75 billion, as against tax payments of £115 billion if no lump sum is available. This indicates a total cost of around £40 billion. Over the average period from entry into the labour market to death, this indicates an annual cost of tax relief on the lump sum of around £ $\frac{2}{3}$ billion per year compared with a situation in which this tax relief is not available.

Tax receipts after retirement for the three possible savings media are shown. If a lump sum is taken, the receipts from annuities bought with savings from PEPs or building societies are negligible while the tax paid on money from pension schemes is quite substantial at £75 billion. This rises to £115 billion if no lump sum is taken, compared with under £0.5 billion for the PEP and building society standards of comparison. Perhaps surprisingly, this implies that without the tax-free lump sum, the post-retirement tax received from the pension scheme less that received from the PEP annuity wipes out most of the extra tax received from contributions to a PEP. This occurs despite the fact that the income from the annuity bought with the PEP is taxable. The very small amount of tax actually paid results from the

fact that the capital element of the annuity is not taxed, and from the importance of the tax-free personal age allowance.

Returning to the tax system as it is, i.e. including the tax-free lump sum, putting the tax costs in Tables 9.2 and 9.3 together allows an estimate to be made of the total cost of tax reliefs for occupational pension schemes relative to the two other savings vehicles. £75 billion is raised from the pension schemes themselves, about £140 billion from the PEP bench-mark, and £290 billion from the savings account. This indicates a cost of around £65 billion relative to a PEP and £215 billion relative to a savings account. Dividing again by 59 to give annual costs results in costs of about £1.1 billion and £3.7 billion per annum respectively.

These estimates are rather lower than those that might be derived from the base assumptions in the extrapolation from the individual examples. The most important reasons for this are the higher real rates of return and longer periods spent in the scheme assumed in the previous chapter. This means not only that less tax is raised from investment income in the building society but also that in each case less post-retirement income is available to be taxed, but this has a greater proportionate impact on the lower taxable incomes from the PEP and building society because of the action of the age allowance.

More importantly these costs are very much lower than those presented in *Inland Revenue Statistics* which shows costs of £7.7 billion in 1989–90 and £8.4 billion in 1990–91. One might have expected our results relative to a savings account to be rather more similar to these numbers. The most important reason for the difference is the low nominal rates of return we have assumed (6 per cent inflation plus 1.7 per cent real return). In those years, both inflation and real interest rates were higher; nominal interest rates remain much higher than those assumed. As explained, the reason for our assumed real rate of 1.7 per cent was to ensure that the funds' assets equalled their outgoings.² If, instead, an interest rate four percentage points higher had been assumed, the annual cost relative to a building society account would have risen by £1 billion. Secondly, because the Inland Revenue figures subtract *current* tax revenues from benefits in payment from pre-retirement tax expenditures, they will show lower post-retirement tax receipts than a methodology which calculates tax on future (higher) benefits.

² This ought to be true on average over all schemes if actuarial calculations regarding liabilities are correct.

The results given, if they are to be taken as indicative of the cost of tax reliefs, must assume, of course, that in the absence of occupational pension tax reliefs, the same amount of saving would be done. The tax effects of this saving disappearing altogether and the money being spent instead of saved can easily be seen, however, for this would be equivalent to the money raised pre-retirement from the PEP, i.e. the tax on contributions.

Again it is worth noting that the figures showing the amount of money produced through the savings account and the amount of tax raised are very much dependent on the rate of inflation. Had inflation been assumed to be 10 per cent, then the income accruing in the savings account would be just £275 billion rather than £340 billion and the tax received would have been £350 billion rather than the £290 billion at 6 per cent inflation. At 2 per cent inflation, by contrast, the income accrued would have been £440 billion and the tax paid £220 billion.

Some Illustrative Reforms

The analysis so far has already suggested the level of possible benefits associated with one frequently mooted reform, namely the abolition of the tax-free lump sum. This indicated extra tax receipts for the government of around £40 billion over the whole period, or just around £ $\frac{2}{3}$ billion per annum. In what follows we illustrate the consequences of three further possible reforms: the abolition of tax relief on contributions, the introduction of the taxation of fund income and the taxation of real fund income. No change is assumed to the taxation of benefits in payment. In each case we assume there is no behavioural change: the net cost to individuals of their contributions remains the same whilst the available benefit falls. This is just one assumption among many that could be made. Savings might increase to protect income in retirement; they might decrease in response to the relatively increased attractiveness of present consumption over savings. (At this point, little discussion of the desirability of the reforms is entered into; nor are any difficulties involved with the plans discussed.)

The effect of abolishing tax relief on contributions is that prior to retirement the tax treatment becomes identical to that of a PEP. Hence the same fund accumulates in each case. However, if the post-retirement tax treatments remain the same, it is clear that more tax will be paid on the private pension being received than on the annuity bought with the PEP because of the exemption from tax of the capital component of

the annuity. Hence there would be no advantage to using a pension scheme and one would expect all savings done through occupational pension schemes to move to PEPs or other similarly treated forms of saving. Hence the tax implications would be a gain to the government of £65 billion or £1.1 billion per year (the tax cost of pension schemes relative to PEPs shown above). For illustrative purposes, however, Table 9.4 shows the income flows assuming no movement between different forms of saving.

TABLE 9.4

Income Flows Associated with Abolition of Relief on Contributions

	Pension (as presently taxed)	Pension (no relief on contributions; no behavioural change)	PEP
Eventual fund	£780 bn	£560 bn	£560 bn
Pre-retirement tax	0	£140 bn	£140 bn
Post-retirement tax			
Lump sum taken	£75 bn	£30 bn	—
No lump sum	£115 bn	£65 bn	—
Average initial payment			
Lump sum taken	£4,600	£2,900	£3,700
No lump sum	£6,100	£4,300	£5,500

For the second column of Table 9.4, benefit paid is based on an accumulation rate of $\frac{1}{85}$ of final salary per year of service with the same contributions as at present. Compared with the present system, £140 billion would be raised pre-retirement by imposing tax on contributions if switching of saving did not occur. £45 billion would be lost from post-retirement taxation, leaving a net gain to the exchequer of £95 billion as against £65 billion if it moved into PEPs. One can also see that, on our assumptions, combining the abolition of tax relief on contributions with the abolition of tax on pensions in payment would have tax consequences very similar to the movement of all savings to a PEP because so little is paid in tax in respect of the annuity bought with the PEP.

Thus far our discussion has assumed the continued existence of the tax-free lump sum. The consequences of combining the taxation of

contributions with the abolition of the lump sum are also shown in Table 9.4. The most obvious of these would be the even greater advantages associated with a PEP as opposed to the reformed pension. Again, one can see that such a reform would raise an extra £90 billion compared with the present system if no change in savings behaviour occurred.

If, instead of maintaining contributions at the current level, investors were to respond to the imposition of tax on contributions by increasing their contributions to a level such that they eventually received the same pension as currently, their contributions would have to increase by around 1.4 times. The tax implications would be to leave the pre-retirement tax at the increased level of £140 billion as in the second column of Table 9.4, but with post-retirement tax receipts at the levels shown in the first column. No more extra tax would be raised pre-retirement for, although more tax would be paid on the actual higher levels of contributions, this extra money contributed would anyway have been subject to tax.

One change to the tax system which has been proposed and would also involve the taxation of contributions would be to replace the current EET regime with a TEE regime. In other words, instead of exempting contributions and taxing benefits, benefits could be exempted and contributions taxed. In the theoretical framework outlined in Chapter 2, these two forms of taxation are equivalent. In practice, they would raise different amounts of tax in the long run as illustrated by the figures in Table 9.4. The appropriate figures to compare for this purpose are the pre-retirement tax figure in the second column with the post-retirement tax figures in the first column. The former is clearly higher, especially by comparison with the case in which a tax-free lump sum is taken. Even where no lump sum is taken, taxing benefits raises less than taxing contributions because of the progressivity of the tax system and the lower levels of income in retirement than in work. All contributions would have tax paid on them while only that proportion of benefits above the tax allowances would see tax levied. Further comments on the differences between EET and TEE regimes were made in Chapter 5.

If, instead of ending tax relief on contributions, the investment income of funds were to be taxed at the marginal rate of the contributor, the effects would be those shown in Table 9.5. The pension payable, with contributions maintained at the same level as now, is based on an accumulation rate of $\frac{1}{98}$ of final salary per year of service.

TABLE 9.5

Income Flows Associated with Abolition of Relief on Fund Income

	Pension (as presently taxed)	Pension (no relief on fund income)	PEP	Savings account
Eventual fund	£780 bn	£480 bn	£560 bn	£340 bn
Pre-retirement tax	0	£150 bn	£140 bn	£290 bn
Post-retirement tax				
Lump sum taken	£75 bn	£20 bn	—	—
No lump sum	£115 bn	£50 bn	—	—
Average initial payment				
Lump sum taken	£4,600	£2,300	£3,700	£1,600
No lump sum	£6,100	£3,700	£5,500	£3,400

Given the inflation rate and rate of return used in the model, the income effects of taxing fund income turn out to be very similar to those of ending tax relief on contributions. Around £150 billion in tax is raised from the fund, whilst post-retirement tax falls from £75 billion to £20 billion if the lump sum is retained or to £50 billion if it is not. Again it is clear that such a reform would render pension schemes less attractive than a PEP. Hence one might again consider the cost of occupational pensions relative to PEPs to measure the cost of any such reform.

Were people to respond to the introduction of fund taxation by saving more to maintain pension benefits, they would have to increase their contributions by about 1.6 times. Were this to occur, total pre-retirement tax would rise to around £240 billion, adding around £4 billion per year to tax revenues. Post-retirement tax would stay the same as under the original system since the benefits payable remain the same. Given the relatively penalised tax treatment that such a reform would involve, though, such a response would be unlikely. The more plausible response would be for funds to flow into other savings media such as PEPs.

Like the amount of tax raised from the building society investment, the amounts raised from taxing fund income are heavily dependent on the rate of inflation assumed. This is illustrated in Table 9.6. Higher rates of inflation would result in even more money being raised, making the pension even less attractive relative to a PEP. If inflation were 10 per cent per annum, for example, rather than the assumed 6 per cent, £200

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billion would be raised in pre-retirement tax and only £400 billion would accrue to the pension fund, though post-retirement tax would fall to only £10 billion (with the lump sum retained) as benefits fell to only $\frac{1}{120}$ of final salary per year in the scheme. On the other hand with just 2 per cent inflation, pension schemes would remain more attractive than PEPs even with fund income taxed. As seen in Table 9.6, only £80 billion would be raised before retirement, though the amount raised after retirement would be £45 billion as the low inflation rate would allow a greater fund to be accumulated and hence more generous pensions (based on seventy-fifths of final salary) to be paid. This again demonstrates the problems of non-neutrality to inflation of the policy of taxing nominal investment returns. It becomes very difficult to predict what pensions will be payable because the money available depends so much on the level of inflation many years into the future.

TABLE 9.6

Income Flows Associated with Abolition of Relief on Fund Income at Different Inflation Rates

	Inflation 6% (base assumption)	Inflation 2%	Inflation 10%
Eventual fund	£480 bn	£620 bn	£390 bn
Pre-retirement tax	£150 bn	£80 bn	£200 bn
Post-retirement tax			
Lump sum taken	£20 bn	£45 bn	£10 bn
No lump sum	£50 bn	£80 bn	£35 bn
Average initial payment			
Lump sum taken	£2,300	£3,400	£1,600
No lump sum	£3,700	£4,900	£3,000

These problems associated with inflation could, of course, be overcome by taxing real fund income. The combination of this with the taxation either of contributions or of benefits would be equivalent to a genuine Comprehensive Income Tax type treatment of pensions. This type of regime may be seen as the other theoretically defensible form of treatment of savings. In Table 9.7 we show the current system, a system with real fund income and benefits taxed, and one with contributions and real fund income, but not benefits, taxed. The same gross levels of contributions would provide pensions based on sixty-sevenths of final salary in the second case and ninety-fifths in the last case. Note that combining the taxation of real fund income with

the taxation of contributions still allows higher benefits than simply taxing nominal fund income.

TABLE 9.7

Income Flows Associated with Taxing Real Fund Income

	Pension (as currently taxed)	Pension (real fund income taxed)	Real fund income and contributions taxed, but not benefits
Eventual fund	£780 bn	£700 bn	£500 bn
Pre-retirement tax	0	£80 bn	£200 bn
Post-retirement tax			
Lump sum taken	£75 bn	£60 bn	0
No lump sum	£115 bn	£95 bn	0
Average initial payment			
Lump sum taken	£4,600	£4,000	£2,400
No lump sum	£6,100	£5,500	£3,900

Taxing real fund income and maintaining the current system of not taxing contributions and of taxing benefits results in an extra £80 billion being raised in tax pre-retirement with £15 billion being lost after retirement, making a total of £65 billion, or just over £1 billion per year, extra. Combining real fund income taxation with taxation of contributions raises rather more than this — £200 billion, an increase in tax receipts over the current system of £125 billion or around £2 billion per year. This extra amount compared with the first reform is partly accounted for by the fact that part of the occupational pensions received in retirement is not taxed because of the level of tax allowances while all contributions will be taxed. Secondly, the existence of the tax-free lump sum increases the difference between the two results. Without the lump sum, a total of £175 billion would be raised under the first reform as against £200 billion in the final TTE regime. This indicates that while ETT and TTE regimes are theoretically equivalent, the existence of allowances renders them practically different in their revenue-raising effects.

Again an alternative assumption could be made regarding the impact of taxing real fund income such that investors increased their contributions to maintain eventual benefits. This would require a contribution rate just 1.1 times greater than current levels and would

involve £85 billion being raised in tax before retirement. Combined with the taxation of contributions, an increase in contribution rates of nearly 1.6 times would be required to maintain benefits, though only the same amount of extra tax would be raised.

One other possible combination of reforms, which we do not consider in detail, would be to tax contributions and nominal fund income together whilst exempting pensions in payment from tax. This would result in a tax regime like that for ordinary building society and other savings accounts and would almost certainly lead to the large-scale removal of funds from occupational pension schemes. For completeness we observe that under such a tax regime, if the same amount were saved, total investment income of £340 billion would accrue (as in a building society) and £290 billion would be raised in tax pre-retirement, while the average pension, with a lump sum taken, would be just £1,300 per year. Pensions would be based on hundred-and-thirty-fifths of salary per year of work.

Conclusions

Constructing a model of the taxation of pensions in conjunction with that of other forms of saving has allowed us not only to show some estimates of the cost of the tax advantages associated with pensions but also to show the effects of a number of possible reforms, including the ending of the anomaly of the tax-free lump sum, the imposition of tax on the contributions to pensions, the imposition of tax on nominal fund income or on real fund income, and some combinations of these.

The clear implication of taxing either nominal fund income or contributions whilst continuing to tax benefits would be that other forms of saving, notably PEPs, would become at least as attractive as saving through a pension fund (at least on reasonable assumptions about the rate of inflation). Given that the nature of a pension fund is such that it imposes restrictions on the availability of benefits (i.e. they are not available until retirement at a given age), any such swing in the tax system away from favouring them could be expected to result in the bulk of new saving being done through other media. Even combining one or other of these reforms with the exemption from tax of pensions in payment would not be adequate to stem a great deal of this flow. Furthermore, such a move would quite clearly benefit most those pensioners who currently pay most in tax, i.e. the richest pensioners.

The dependence of tax receipts and pensions available on inflation

when nominal investment income is taxed makes clear the problems associated with the taxation of nominal fund income. By contrast, the taxation of real fund income looks rather more sensible and should be the route to go down if a Comprehensive Income Tax treatment is desired. But even combining this either with the taxation of benefits as at present or with the taxation of contributions results in the tax treatment of pensions being harsher than that of, for example, PEPs. Hence the attractiveness of occupational pensions would still be damaged.

By contrast, the abolition of the tax-free lump sum would not be expected to have any such major impact, though still bringing the tax raised from pensions a good deal closer to that which might be raised from PEPs. It might raise around £ $\frac{2}{3}$ billion per year. It would not obviously favour one group over any other.

CHAPTER 10

CONCLUSIONS

We have looked at the taxation of pensions both within a theoretical framework of possible tax regimes for pensions and within the context of the taxation of other savings media. Both of these frameworks are vital for any sensible conclusions to be drawn about the taxation of pensions.

Of the possible taxation regimes, one is most popular throughout the world and that is the Expenditure Tax regime. This is essentially the regime current in Britain. It involves the tax deductibility of contributions, the exemption of fund income from taxation and the taxation of pensions in payment. The main alternative to this would be a Comprehensive Income Tax under which contributions and fund income would be taxable and pensions in payment exempt from tax.

There are good reasons for the popularity of the Expenditure Tax treatment of pensions. It avoids problems associated with accurately identifying and assigning contributions from employers, and of taxing fund income at an appropriate rate. It maintains a post-tax rate of return equal to the pre-tax rate of return and thus, unlike a Comprehensive Income Tax, does not discourage consumption in the future relative to consumption now. Nor does it suffer from the problems of a system which taxes nominal returns and is thus exposed to high levels of inflation with the risk of causing negative real rates of return.

Much of the debate surrounding the tax treatment and possible reforms to it centres around hopes of raising extra money. These hopes may be ill founded both because of the complexity involved in taxing pensions at other points and because increased taxation would render private pensions less attractive and reduce the amount of money saved through them.

The actual costs of the current treatment can be measured in terms of tax expenditures. We have examined this concept and shown that it is only meaningful within the context of a bench-mark against which expenditures can be measured. Then the size of the tax expenditure depends on the bench-mark in use. This we illustrated first by use of a hypothetical model comparing the tax costs of a pension with those of a PEP and an ordinary savings account. Naturally the costs relative to a PEP were a great deal lower than those relative to the ordinary interest-bearing savings account.

Developing a model on the basis of actual data, we estimated an actual annual cost of tax relief on pensions of just over £1 billion relative to a PEP and just under £4 billion relative to an ordinary savings account. These are rather lower than figures frequently mentioned and the latter is highly dependent on the level of interest rates. The figure relative to the PEP bench-mark is probably the more accurate costing as savings now made through pensions would be likely to move to the next best asset if the tax reliefs on pensions were to be removed.

The model also allowed us to demonstrate the costs and benefits of certain reforms. The imposition of tax on either contributions or fund income made the pension no more attractive than a PEP. Hence one would expect the revenue implications of such a move to equal the cost of tax relief on pensions relative to the PEP bench-mark. Removing the tax-free lump sum also significantly reduced the relative attractiveness of pensions, and would raise around £ $\frac{2}{3}$ billion per year compared with the present system.

Which, if any, of these reforms is desirable? We have already seen that there are many advantages to the present Expenditure Tax type treatment of pensions both in principle and in practice. Thus there seems little to commend the taxation either of contributions or of fund income, particularly as the revenue effects would not be as dramatic as often supposed. However, there is one aspect of pension taxation which is more generous than the ideal of an Expenditure Tax, and that is the existence of the tax-free lump sum. Its existence seems to be something of an anomaly, although any reform here must look to avoid any element of retrospective taxation.

There may be very good reasons for suggesting that governments should use the tax system to encourage people to save for their retirement. In the absence of such encouragement, myopia may lead to substantial underprovision. But a great deal of thought needs to go into how this encouragement might best be given, and how much needs to be given. It is unlikely that the lump sum is the most appropriate form of encouragement; indeed it is unclear that anything more than a straightforward Expenditure Tax treatment is required. If more is required then other ways of providing it should be considered.

The other way in which the taxation of pensions differs from the full Expenditure Tax lies in the cap on earnings on which tax-deductible contributions can be made. Although this cap is presently unimportant, being very high relative to average earnings, its effect will increase as real earnings increase because it is set only to rise in line with prices.

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With continued earnings growth, this policy cannot be upheld indefinitely as denser areas of the earnings distribution move towards the cap.

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